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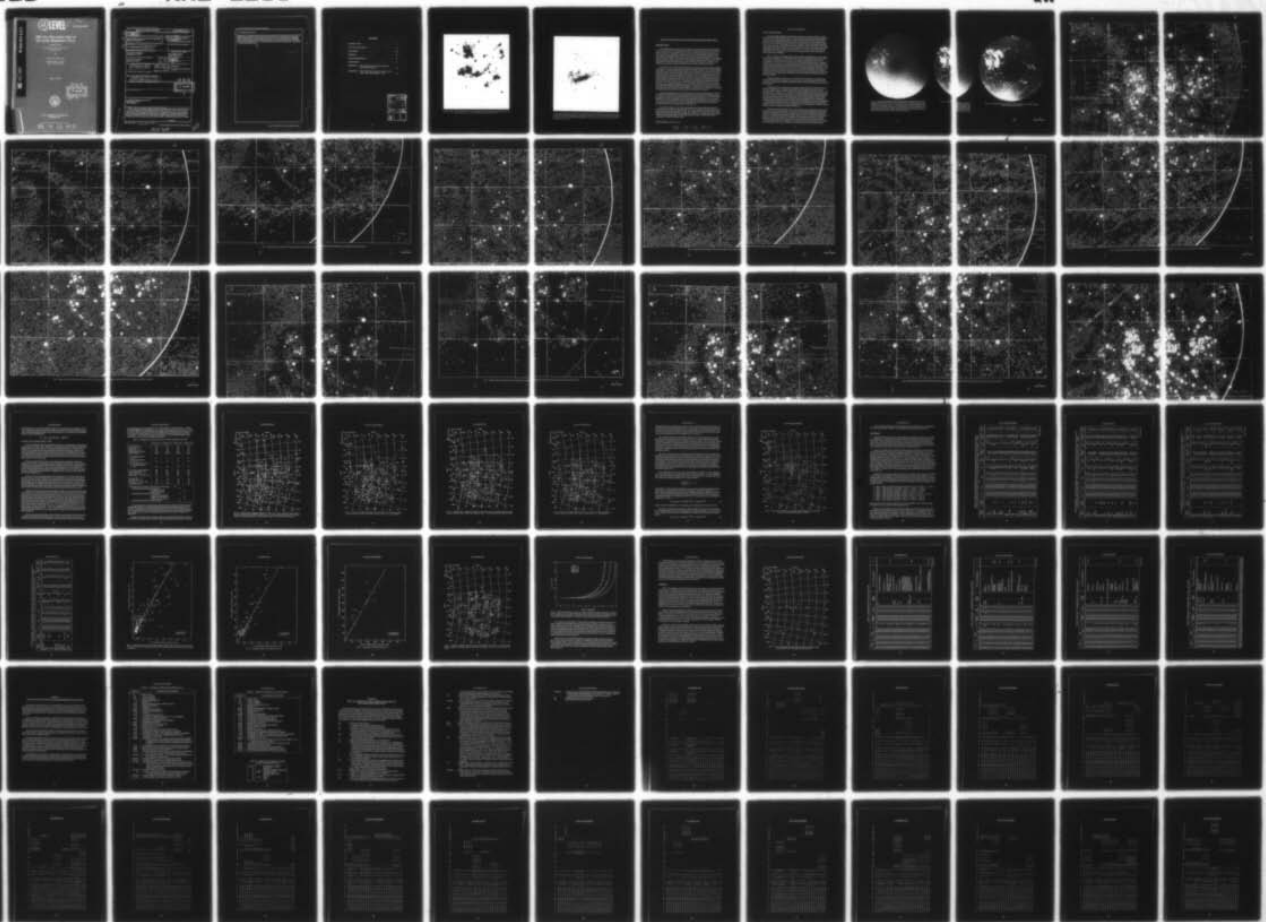
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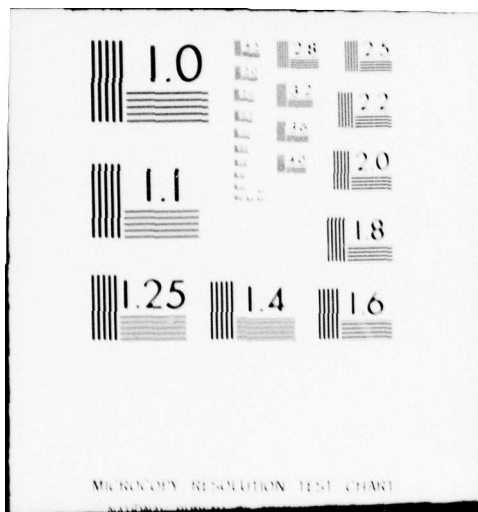
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S201 Far-Ultraviolet Atlas of the Large Magellanic Cloud

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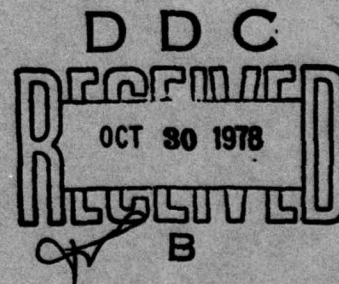
*NASA Johnson Space Flight Center
Houston, Texas*

and

GEORGE R. CARRUTHERS

*Upper Air Physics Branch
Space Science Division*

July 12, 1978



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| 20. ABSTRACT (Continue on reverse side if necessary and identify by block number) <u>Far-ultraviolet electrographic images, covering the wavelength ranges 1050 to 1600 Å and 1230 to 1600 Å, were obtained of the Large Magellanic Cloud during the Apollo 16 mission with the NRL Far-Ultraviolet Camera/Spectrograph (Experiment S201). The images have about 4-arc-minute resolution and reveal early-type star associations, individual early-type LMC stars, and galactic foreground stars. The images were analyzed in the manner described in the "S201 Catalog of Far-Ultraviolet Objects" (NRL Report 8173), and isodensity contour maps of the LMC were generated from the far-UV images.</u> | | |

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20. ABSTRACT (Continued)

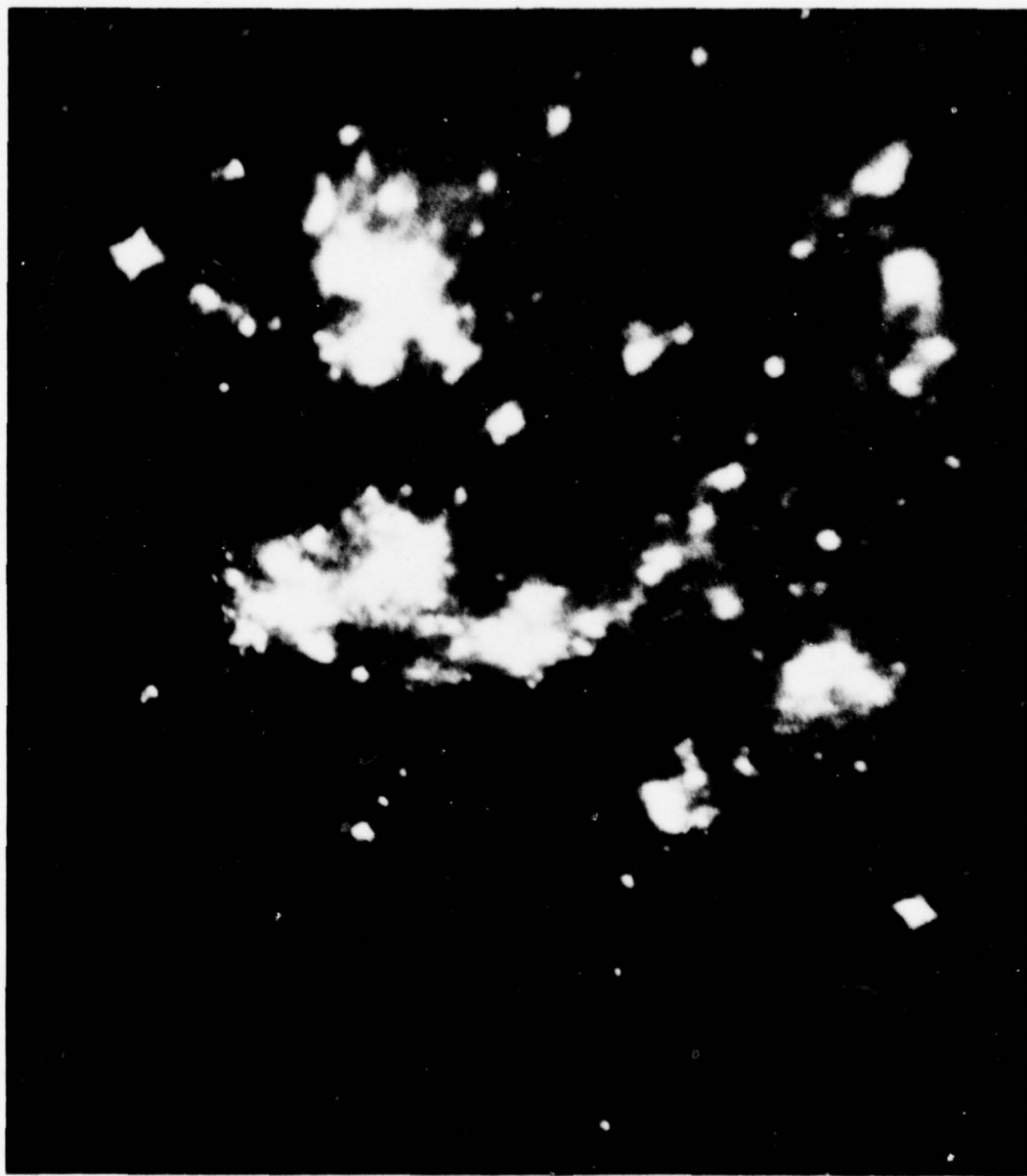
Individual far-UV brightnesses were determined, and corrected for interstellar extinction, for 122 Lucke-Hodge associations and 157 Henize nebulas. Over 130 other objects, of which 20 were identified as galactic foreground stars, were also measured. The ratio of UV flux to hydrogen Balmer-alpha ($H\alpha$) intensity, denoted "hydrogen index," was determined for 90 of the Henize nebulas. The Atlas listing, which lists the individual far-UV flux measurements and hydrogen index determinations, is also available on a seven-track magnetic tape.

(H-alpha)

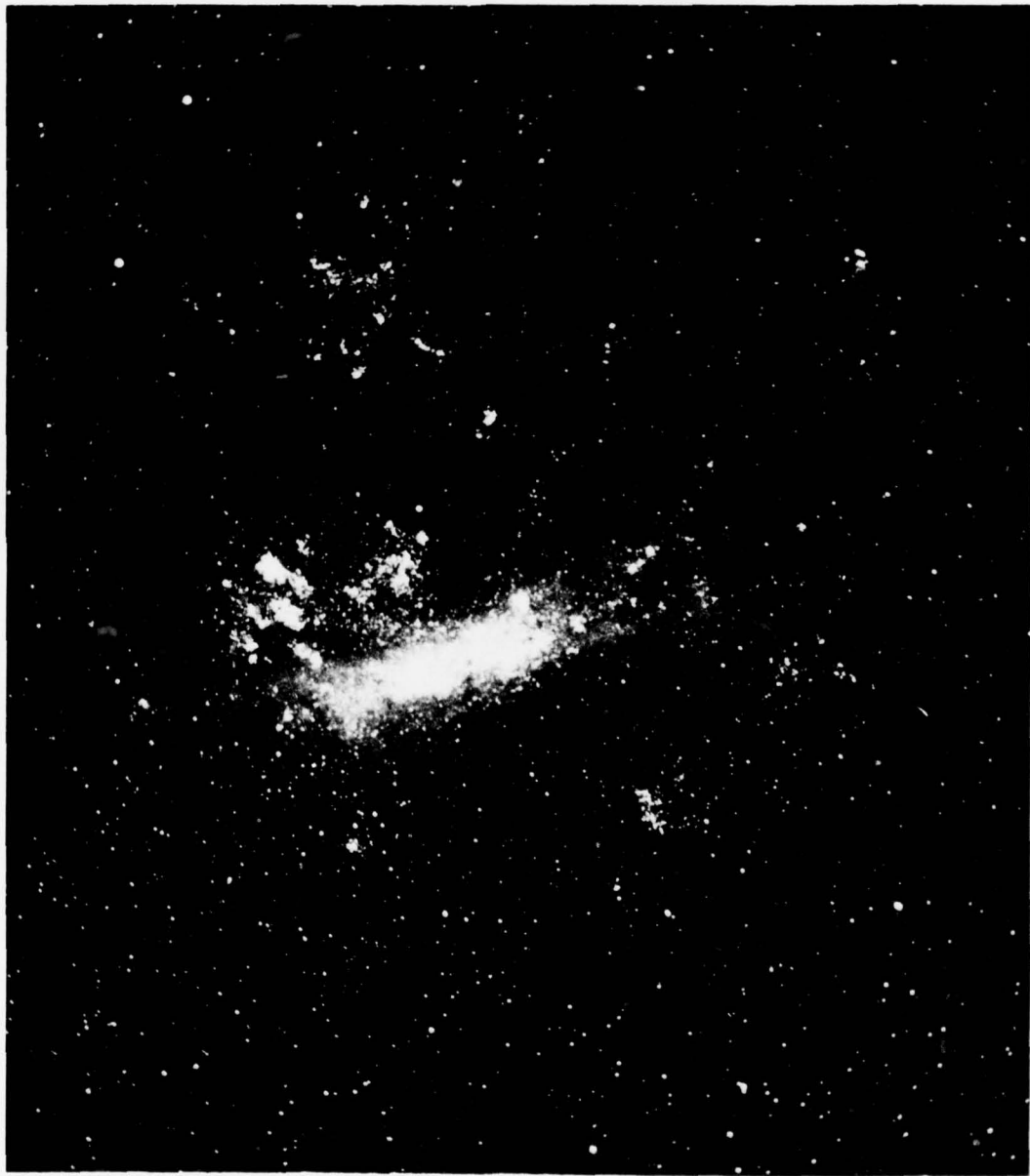
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Far-UV (1250 to 1600 Å) electrograph of the Large Magellanic Cloud (LMC) obtained from the lunar surface. The scale is 2.8 arc-min/mm; north is up, and east is to the left.



Ground-based photograph of the LMC in visible light (courtesy of Lick Observatory). The view is the same as that of the far-UV electrograph on the facing page. The bright east-west bar in visible light is inconspicuous in the far UV, whereas the hot-star groupings in the outer regions of the LMC are relatively much more conspicuous in the far UV.

S201 FAR-ULTRAVIOLET ATLAS OF THE LARGE MAGELLANIC CLOUD

INTRODUCTION

The Naval Research Laboratory's Far-Ultraviolet Camera/Spectrograph (Experiment S201) was operated on the lunar surface during the Apollo 16 mission 21-23 April 1972. A primary objective of this experiment was to obtain far-ultraviolet images and spectra of stars, nebulae, and extragalactic objects under the low-sky-background conditions of the lunar surface. Preliminary results of S201 were given by Carruthers and Page [1]; other papers have given details of the instrument [2], imagery and spectrography of the terrestrial upper atmosphere and geocorona [3-5], and imagery of nebulosities in Cygnus [6]. The companion to this report, *S201 Catalog of Far-Ultraviolet Objects* [7], provides a compendium of photometry of stars and starlike objects in all ten S201 fields of view.

One field of view observed during the Apollo 16 mission included the Large Magellanic Cloud (LMC). A sequence of exposures beginning 22 April 1972 at 17:18.5 UT and ending at 23.20 the same day included direct imagery in the 1050-to-1600-Å and 1250-to-1600-Å wavelength ranges, with exposure times up to 10 min and 30 min respectively, and spectrographic exposures in the 500-to-1600-Å and 1050-to-1600-Å wavelength ranges, with exposure times up to 30 min and 200 min respectively. The spectrographic data on the LMC are described by Carruthers and Page [8], and the LMC imagery and spectra are briefly discussed by Page and Carruthers [9]. The present report will present the final photometric reduction of the S201 imagery of the LMC. The data are presented in the form of charts representing the ultraviolet brightness vs position over the LMC (isodensity contour plots) and a tabulated listing giving peak and integrated UV brightnesses for individual objects or groupings in the LMC. The data listing (available on magnetic tape, as described in Appendix A) is presented in Appendix B in order to have it at the end of the report.

Ultraviolet observations of the LMC have also been made by other observers. These include far-UV photometry of selected areas made with the Astronomical Netherlands Satellite (ANS), from which it was concluded that the interstellar extinction curve in the LMC is anomalous [10-12] in comparison to that found generally applicable in our own galaxy [13]. Far-UV spectrophotometry of the entire LMC was obtained with the Apollo 17 Far-UV Spectrometer [14]. Far-UV imagery of the LMC has been obtained from Skylab by Henize [15] and from a sounding rocket by Smith [16].

Ground-based studies of the LMC are extremely numerous. Particularly worthy of mention here, for comparison with the S201 far-UV measurements, are the Balmer- α measurements of Henize and coworkers [17,18], the catalogs of OB associations of Lucke and Hodge [19,20], and the LMC atlas of Hodge and Wright [21]. Among publications dealing with the spectral classifications of individual early-type stars in the LMC are those of Ardeberg et al. [22] and Walborn [23].

DATA AND ANALYSIS

The direct-imagery frames from the S201 instrument covered 20° -diameter circular fields of view and had limiting resolution of about 2 arc-minutes at field center, degrading to about 4 arc-minutes near the edges. The LMC was near the edge of the field in those frames in which it appeared; hence the resolution was typically 3 to 4 arc-minutes. Exposures of 1, 3, and 10 min were taken with a LiF corrector on the electrographic Schmidt camera (ILi exposures, wavelength range 1050 to 1600 Å, frames A124, A125, and A126), and exposure times of 3, 10, and 30 min were taken with a CaF₂ corrector (ICa exposures, wavelength range 1250 to 1600 Å, frames A128, A129, and A130). The frontispiece on pages iv and v is a comparison of the 10-min ICa exposure (frame A129) with a ground-based visible-light photograph.

The ILi exposures on all target fields include a diffuse background due to interplanetary Lyman- α emission [4]. This background produced a rather high fog level on the 3-min ILi exposures and made nearly all 10-min ILi exposures (including that of the LMC) unusable due to saturation of the emulsion. The LMC camera field was near the southern lunar horizon as seen from the Apollo 16 landing site, and the LMC exposures exhibited an additional diffuse background whose intensity was related to angle above the horizon. This background was particularly noticeable on the ILi exposures but was also detectable on the longer ICa exposures. Its source is not yet certain, but a likely possibility is scattering of sunlight by dust electrostatically suspended above the lunar surface. Figures 1a and 1b compare the full-frame images of the LMC field in the 1050-to-1600-Å and 1250-to-1600-Å wavelength ranges.

By happy chance the LMC is close to the lunar south celestial pole. Therefore there was no noticeable image smearing due to lunar rotation, even in the longest (30-min ICa) exposure. This allowed considerably fainter objects to be detected than in most of the other S201 imagery.

The data frames were analyzed by scanning the flight films with a Boller and Chivens PDS microdensitometer. A raster scan of 1024 by 1024 elements at 33- μ m (1.19-arc-minute) intervals was used, and the quantity recorded on magnetic tape was 100 times optical density d : $D = 100 \log_{10} I_0/I$. An asset of the electrographic recording technique is that the optical density of the processed emulsion is directly proportional to integrated photon flux up to densities of about 1.5 d , and the density-exposure relationship can be usefully determined to densities above 3.0 d . Preflight laboratory calibrations of the instrument's spectral response and absolute sensitivity were used to determine the ultraviolet brightnesses of observed diffuse and point sources. Observations of the hydrogen geocoronal and interplanetary Lyman- α emissions [4] are consistent with other measurements of these emissions and hence tend to confirm the preflight calibrations.

The PDS tapes were analyzed on the Univac 1108 and 1110 computers at the Johnson Space Center, to produce isodensity contour plots. Details of the analysis procedures and computer programs are given in the companion report, "S201 Catalog of Far-Ultraviolet Objects" [7]. Figures 2 through 9 are contour plots for the 10-, 3-, and 30-min ICa frames and the 1- and 3-min ILi frames. The densities were typically smoothed by a weighted averaging process between the particular picture element and the surrounding 12 pixels. Also, the density values were "linearized" by correcting for the nonlinearity of the density-exposure relation (but not for the lag in the PDS microdensitometer response at high

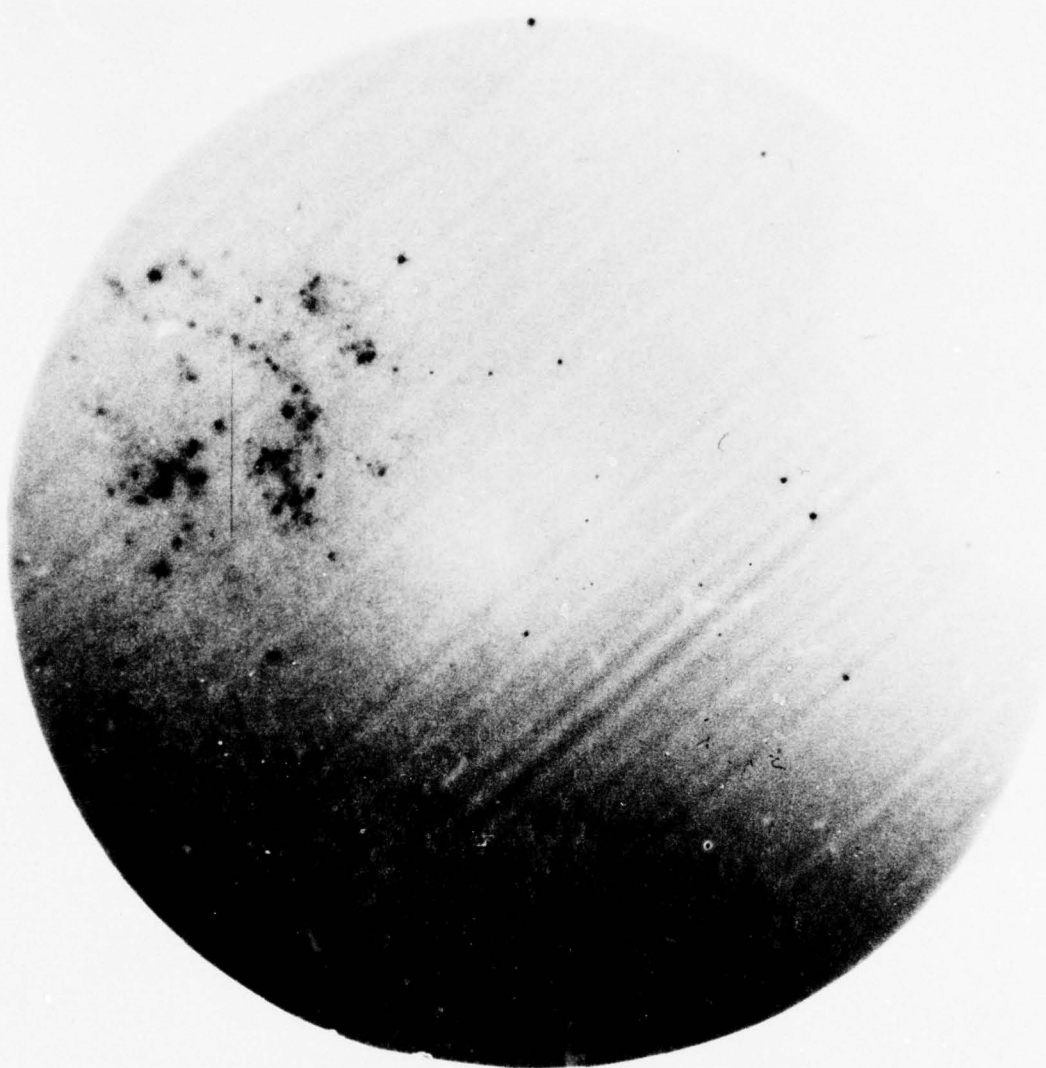


Fig. 1a — Full-field S201 imagery frame A125 including the Large Magellanic Cloud. The wavelength range is 1050 to 1600 Å, and the exposure time is 3 min. This frame is to be compared with the frame in Fig. 1b. The diagonal streaks and irregular markings in each frame are of instrumental origin, as is the lenticular area of lower background in the upper right and the region of slightly lower background near frame center. The background increases toward the bottom of each frame, which is about 4 degrees above the southern lunar horizon as seen from the Apollo 16 landing site.

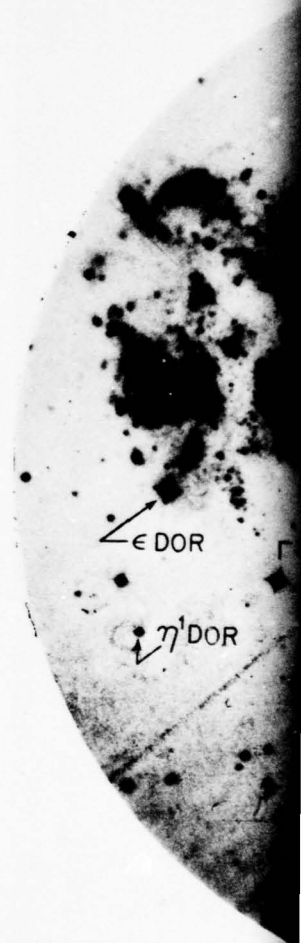


Fig. 1b — Full-field

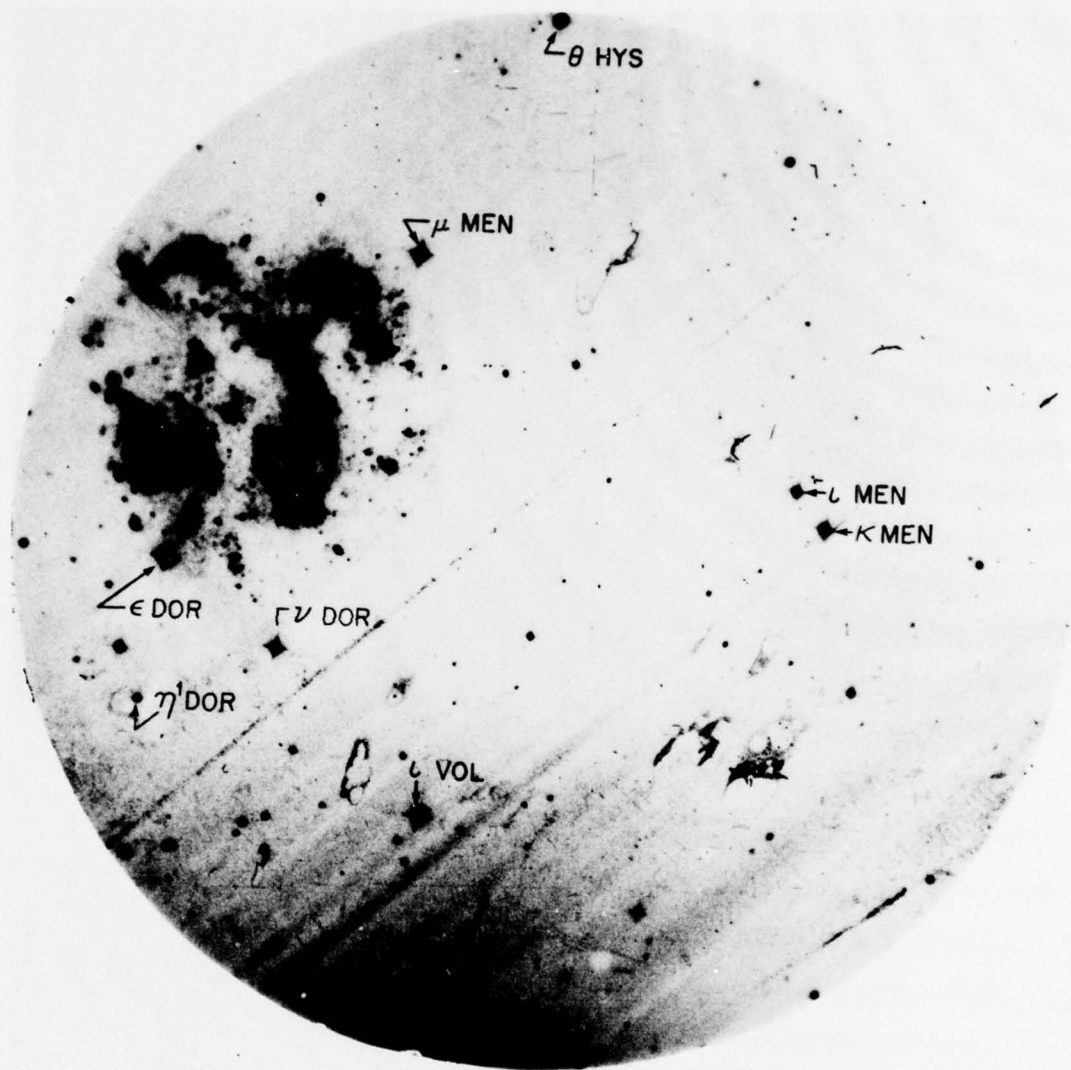
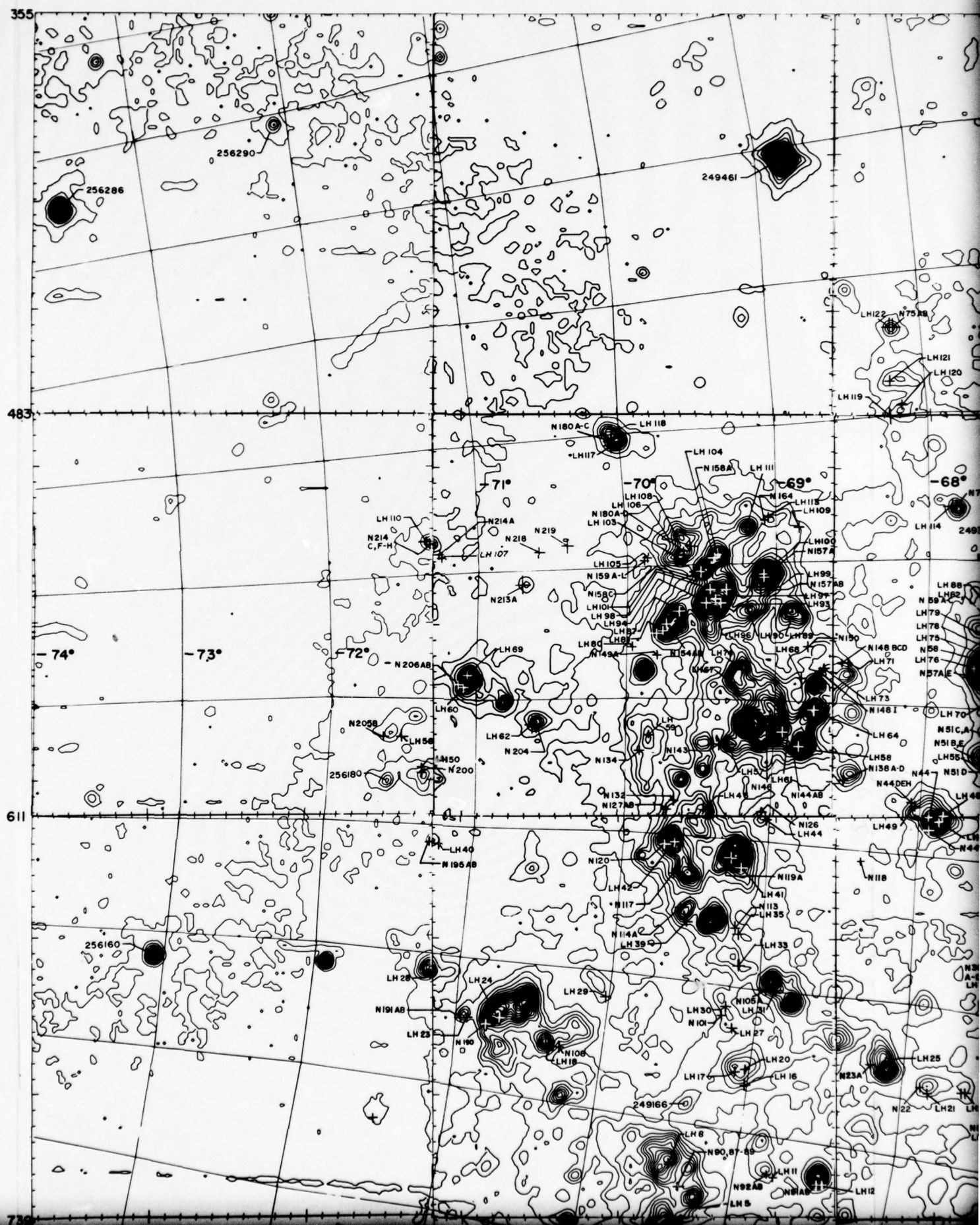
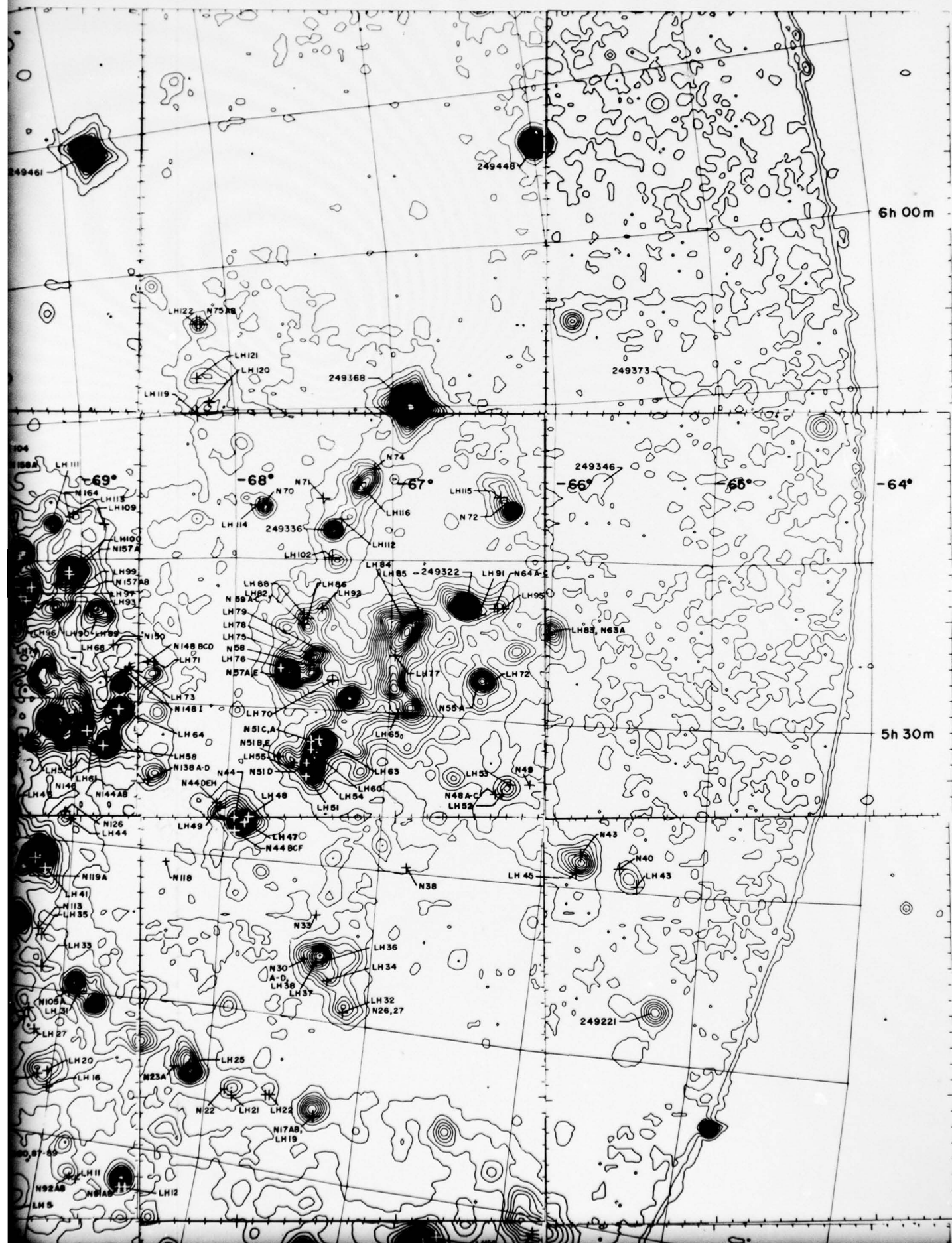


Fig. 1b — Full-field S201 imagery frame A130. The wavelength range is 1250 to 1600 Å, and the exposure time is 30 min.

Magellanic Cloud. The
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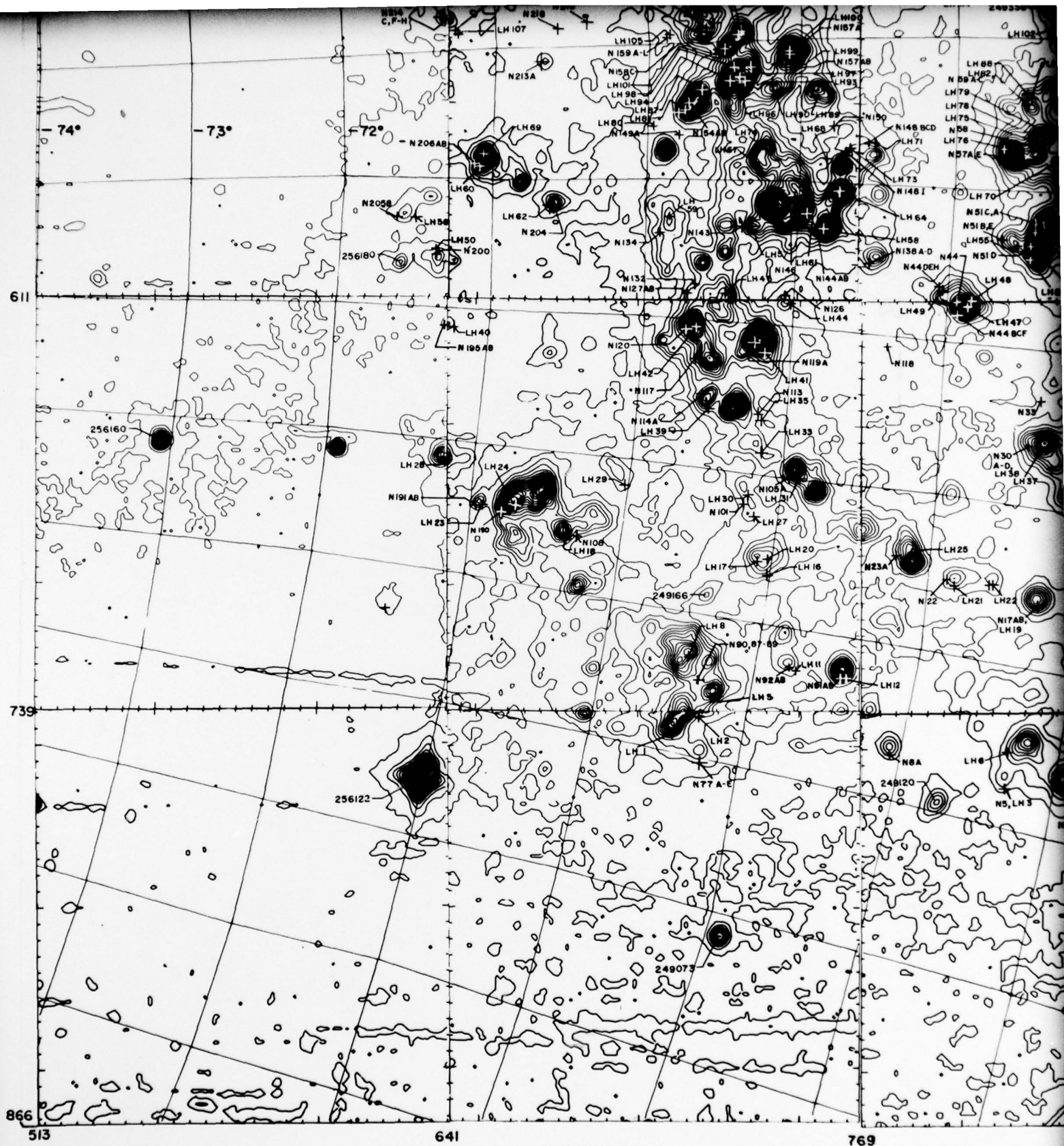
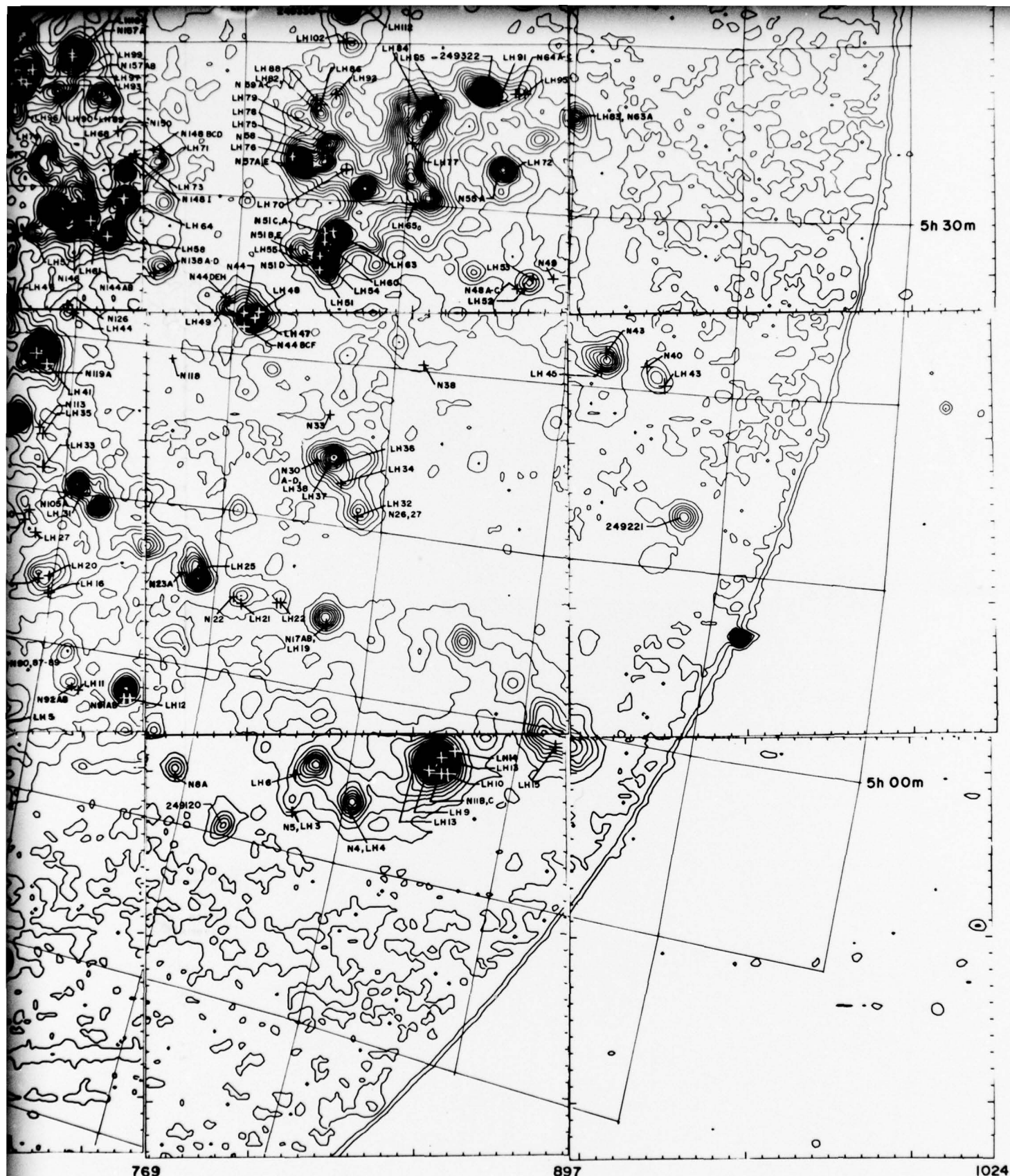
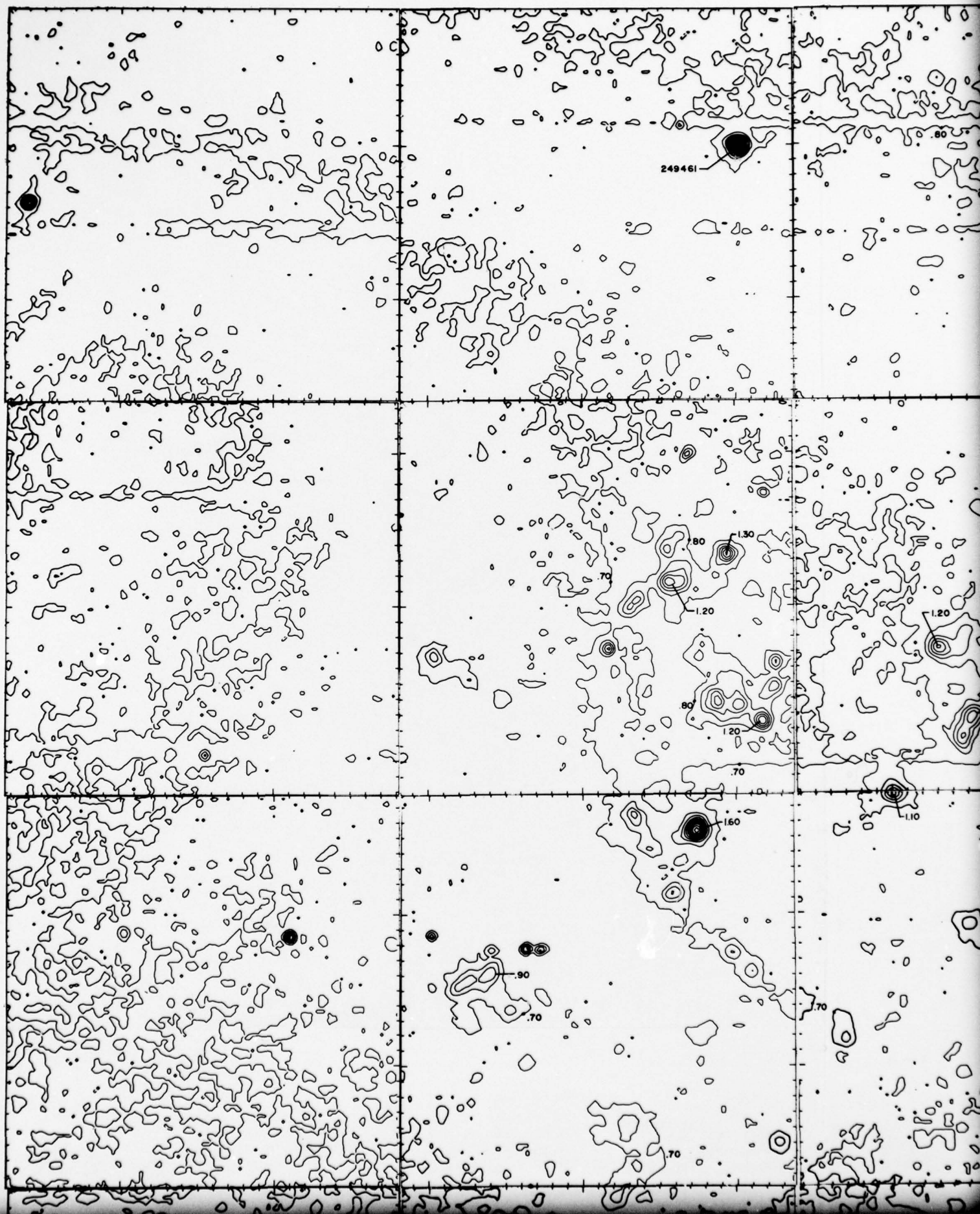


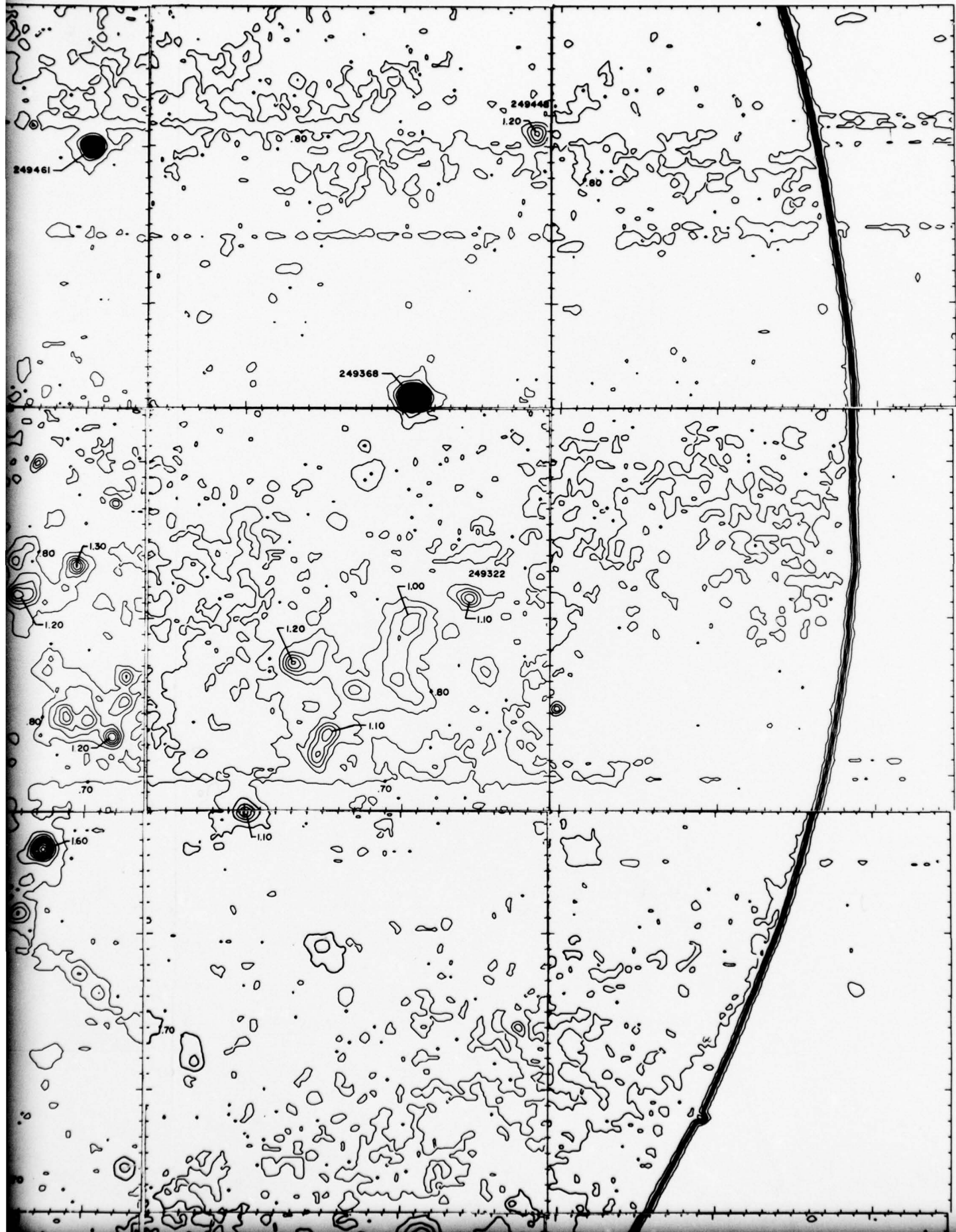
Fig. 2 — Density contours at intervals of 0.10D on frame A129, 10-min exposure, ICa (1250 to 1600 Å). The scan coordinates are $x = 513$ to 1024 rasters, and, from top to bottom, $y = 355$ to 866 rasters; intervals on the margins are 5 rasters each. On the right, the position in the sky is indicated in degrees, arcminutes and arcseconds. The scale on this reproduction is 1.75 arc-min/mm. An approximate $\alpha\delta$ grid is superimposed, and positions of foreground stars are identified by SAO Catalog numbers.



exposure, ICa (1250 to 1600 Å). The scan coordinates in this figure (and in Figs. 3 through 9) are, from left to right; intervals on the margins are 5 rasters each. One raster (33 μm on the film frame) corresponds to 1.19 arc-min approximate αδ grid is superimposed, and positions of LH associations and Henize nebulas (N numbers) are

1





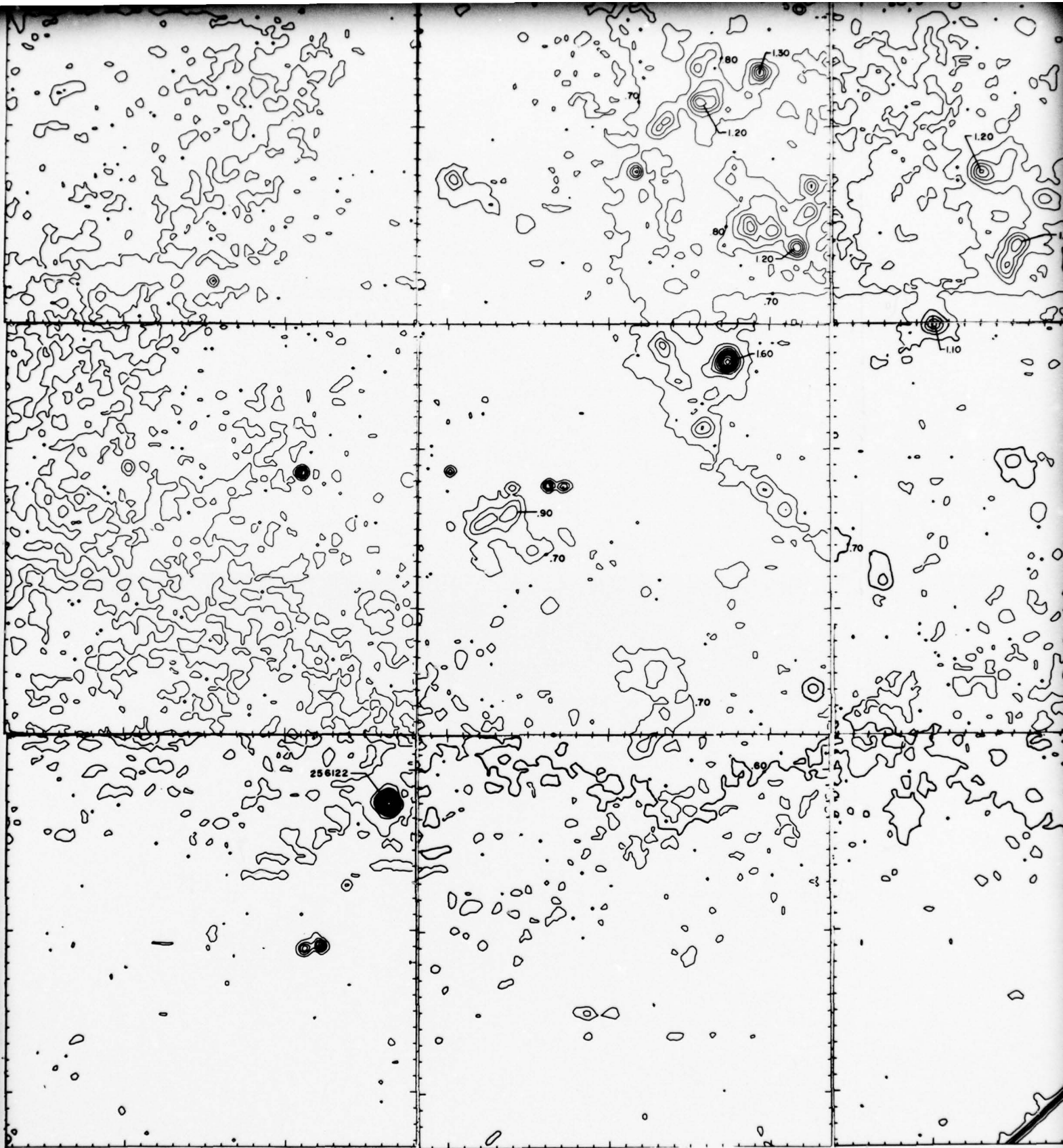
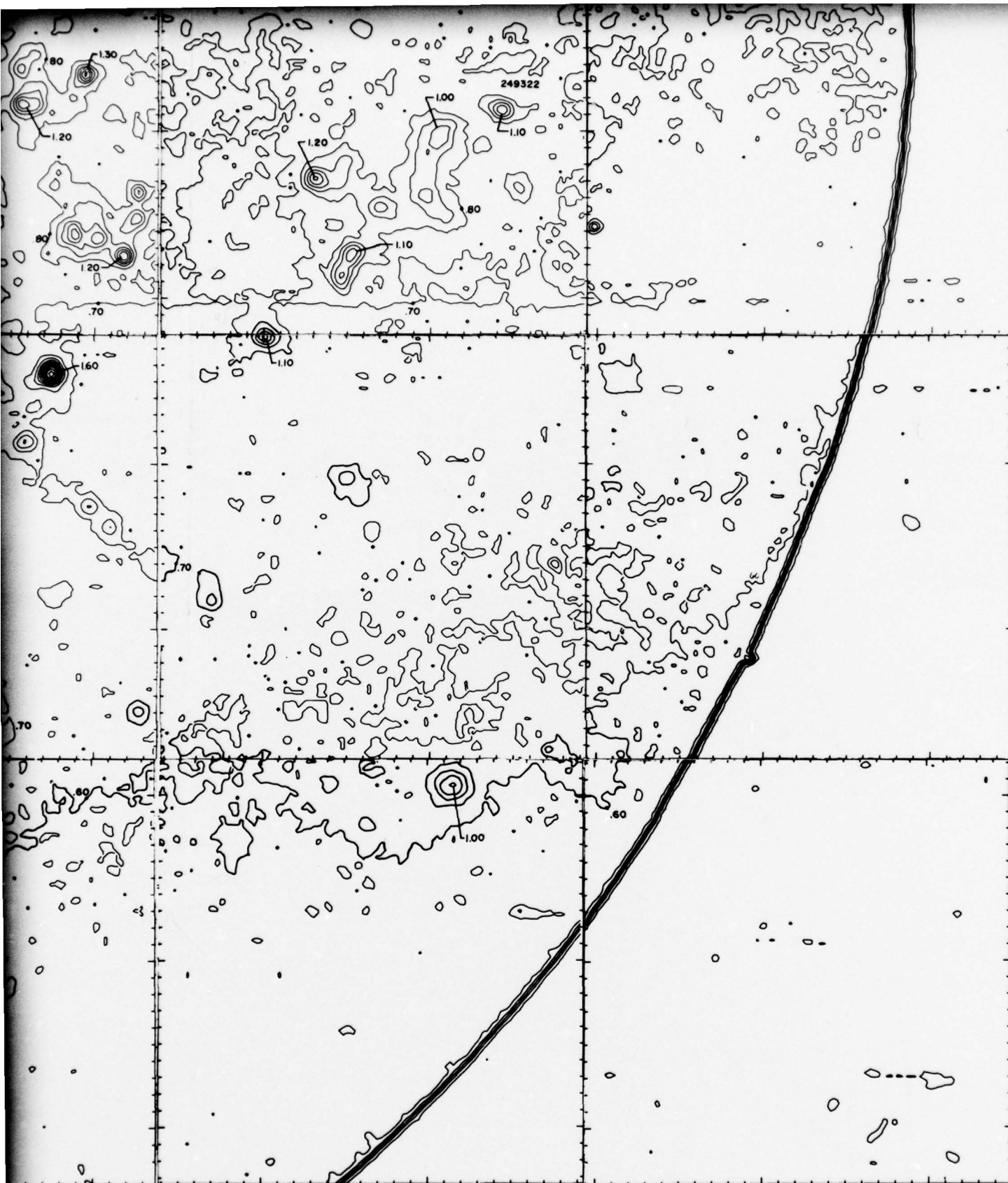
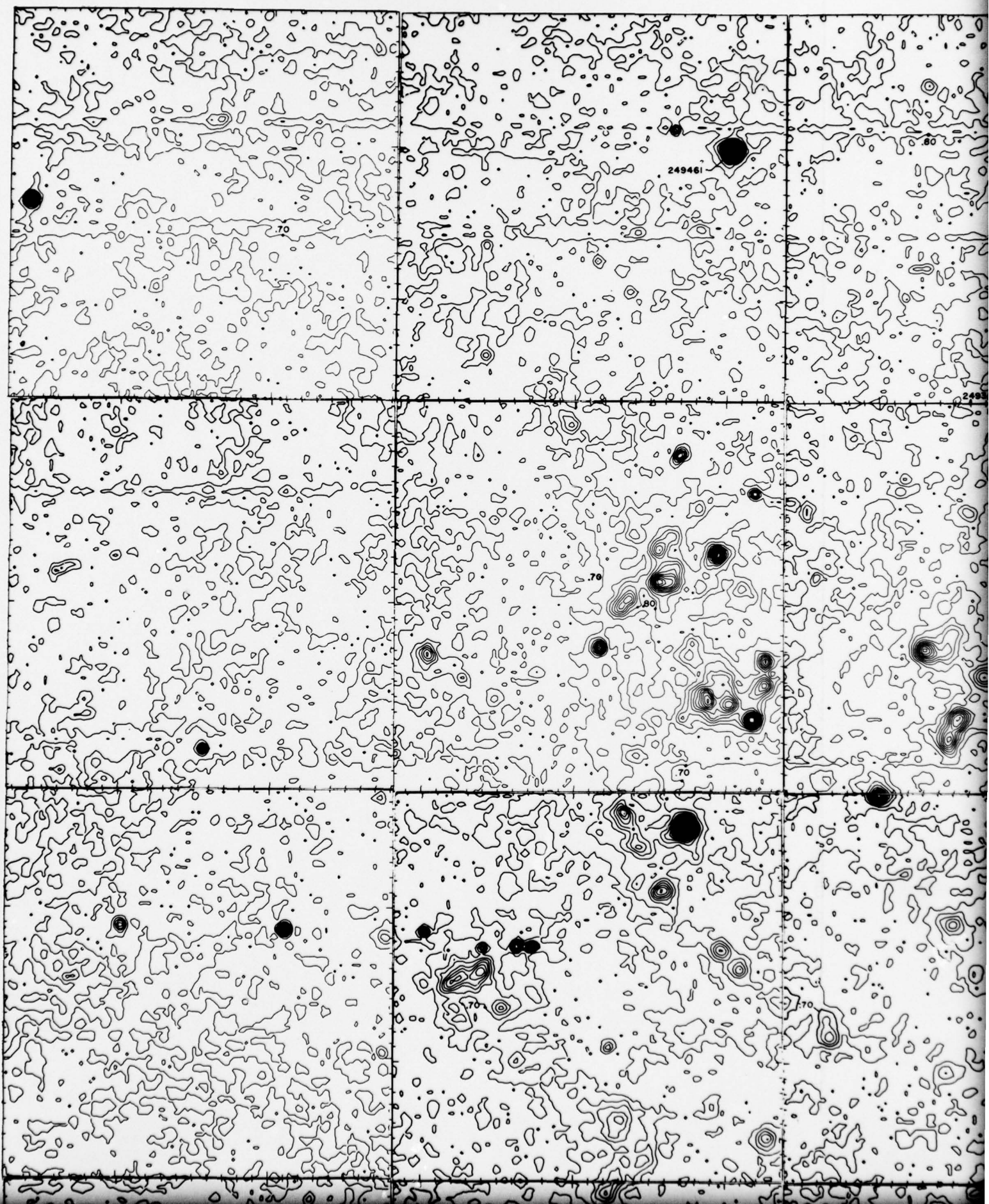


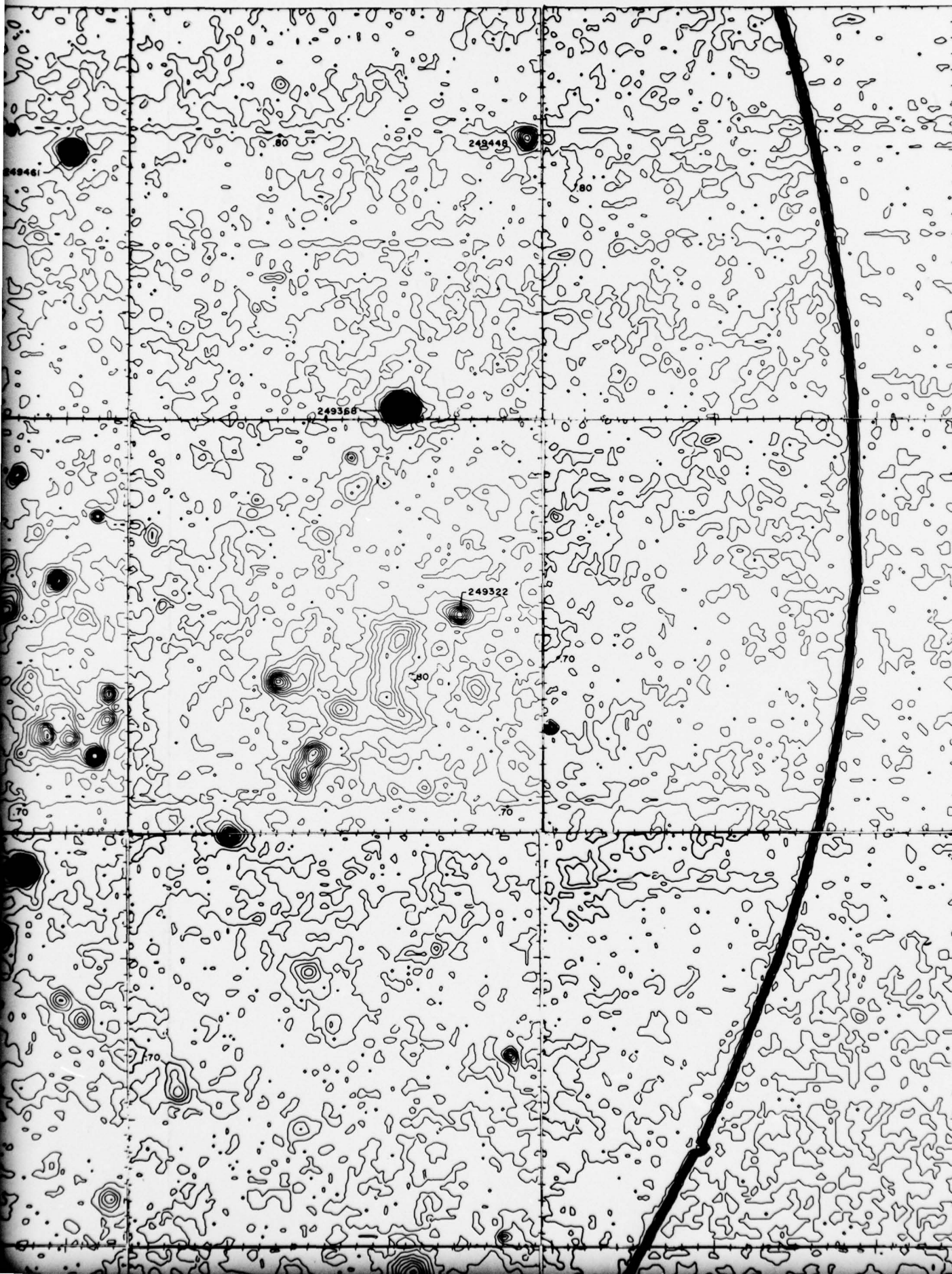
Fig. 3 — Density contours at intervals of 0.10D on frame A124, 1-min exposure, ILi (1



Intervals of 0.10D on frame A124, 1-min exposure, ILi (1050 to 1600 Å)

1





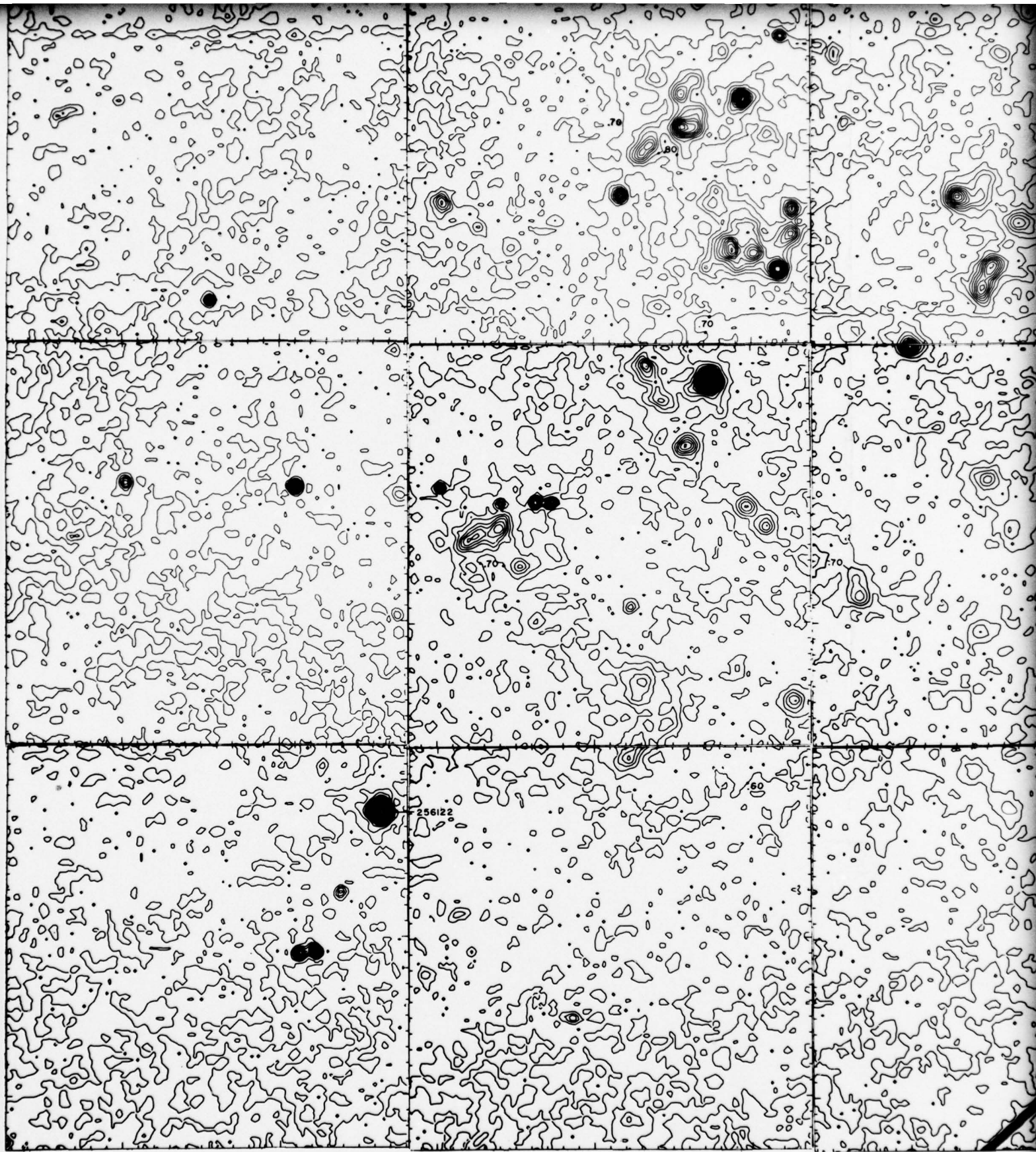
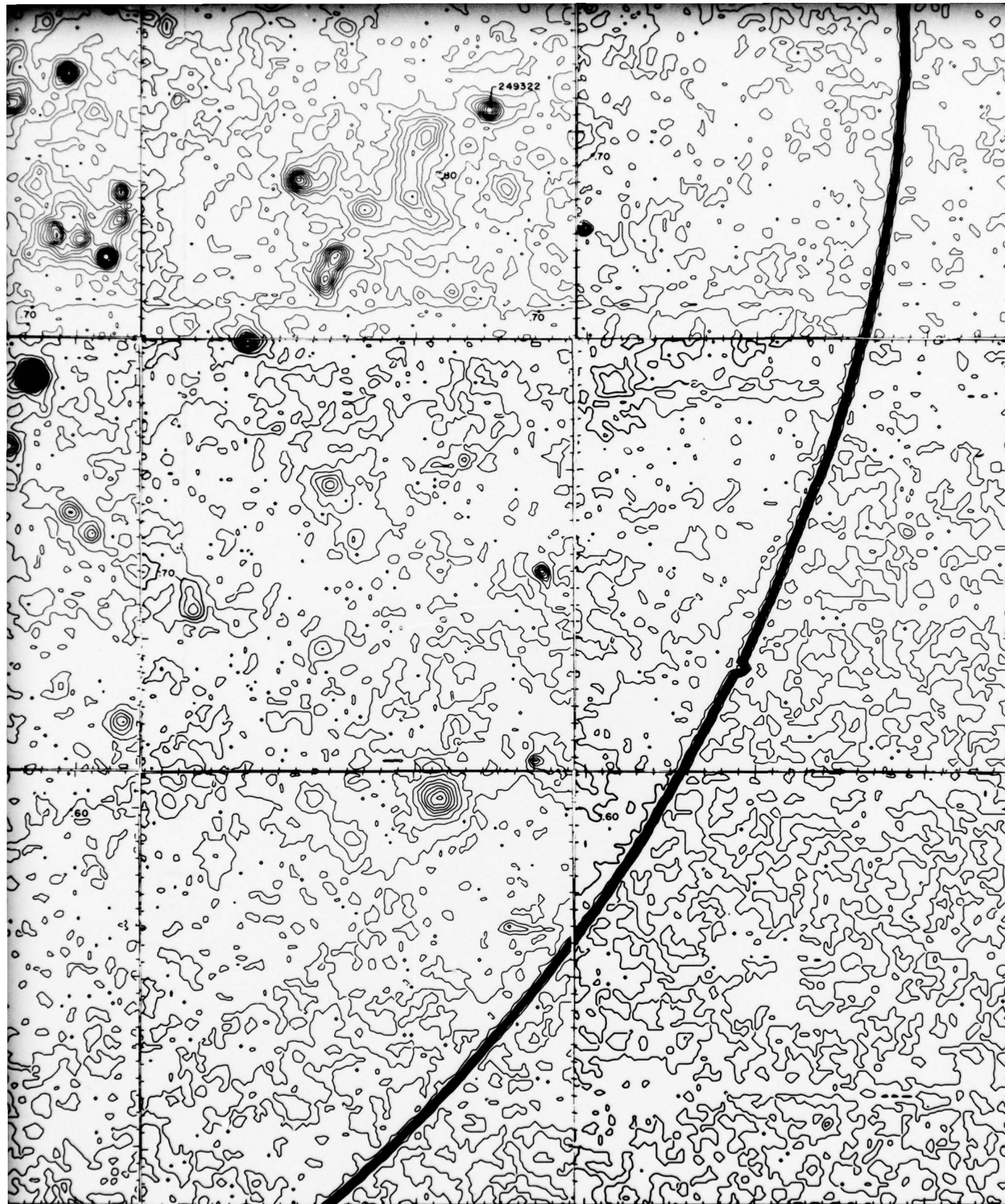


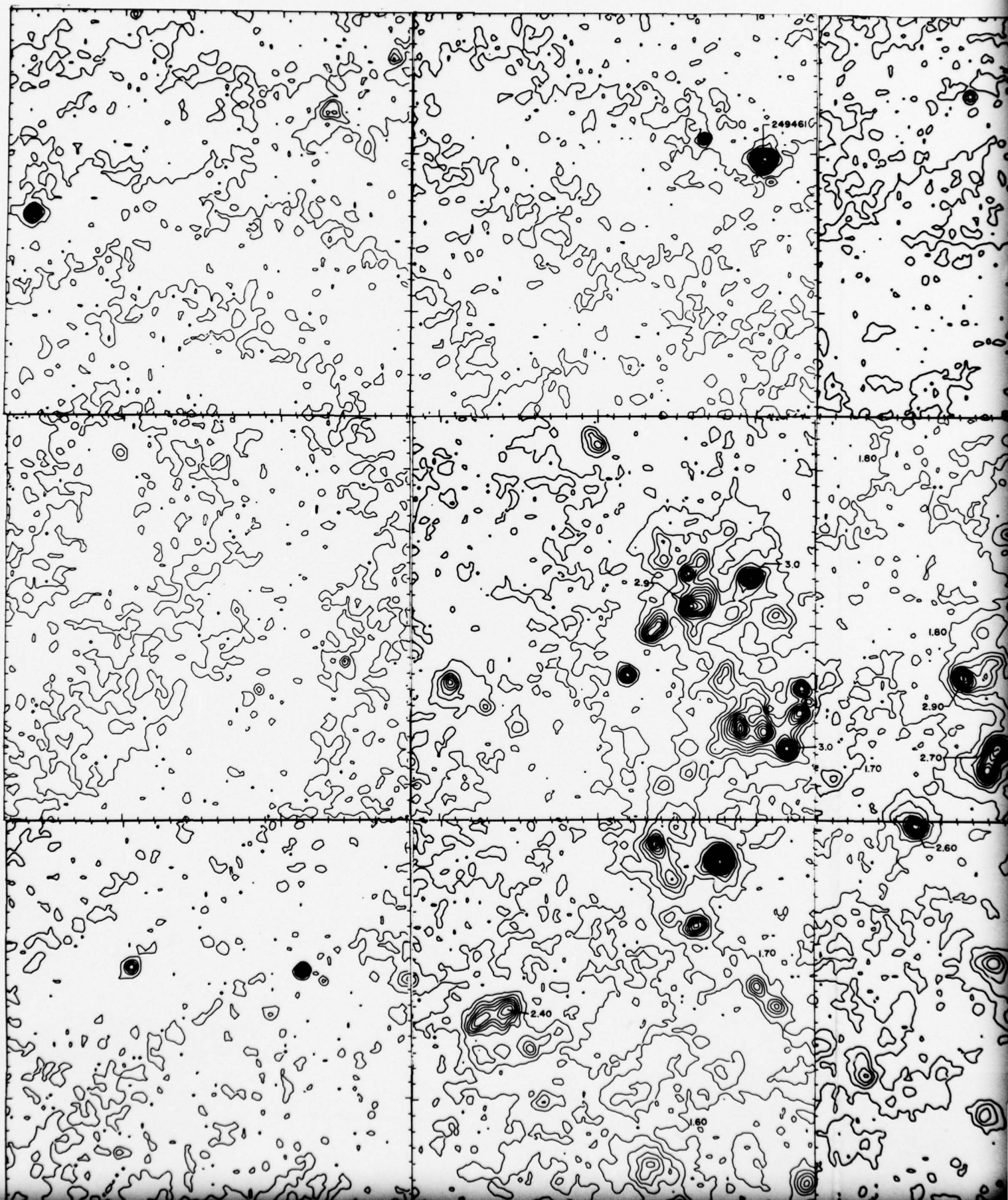
Fig. 4 — Density contours at intervals of 0.05D on frame A124, 1-min exposure, ILi (

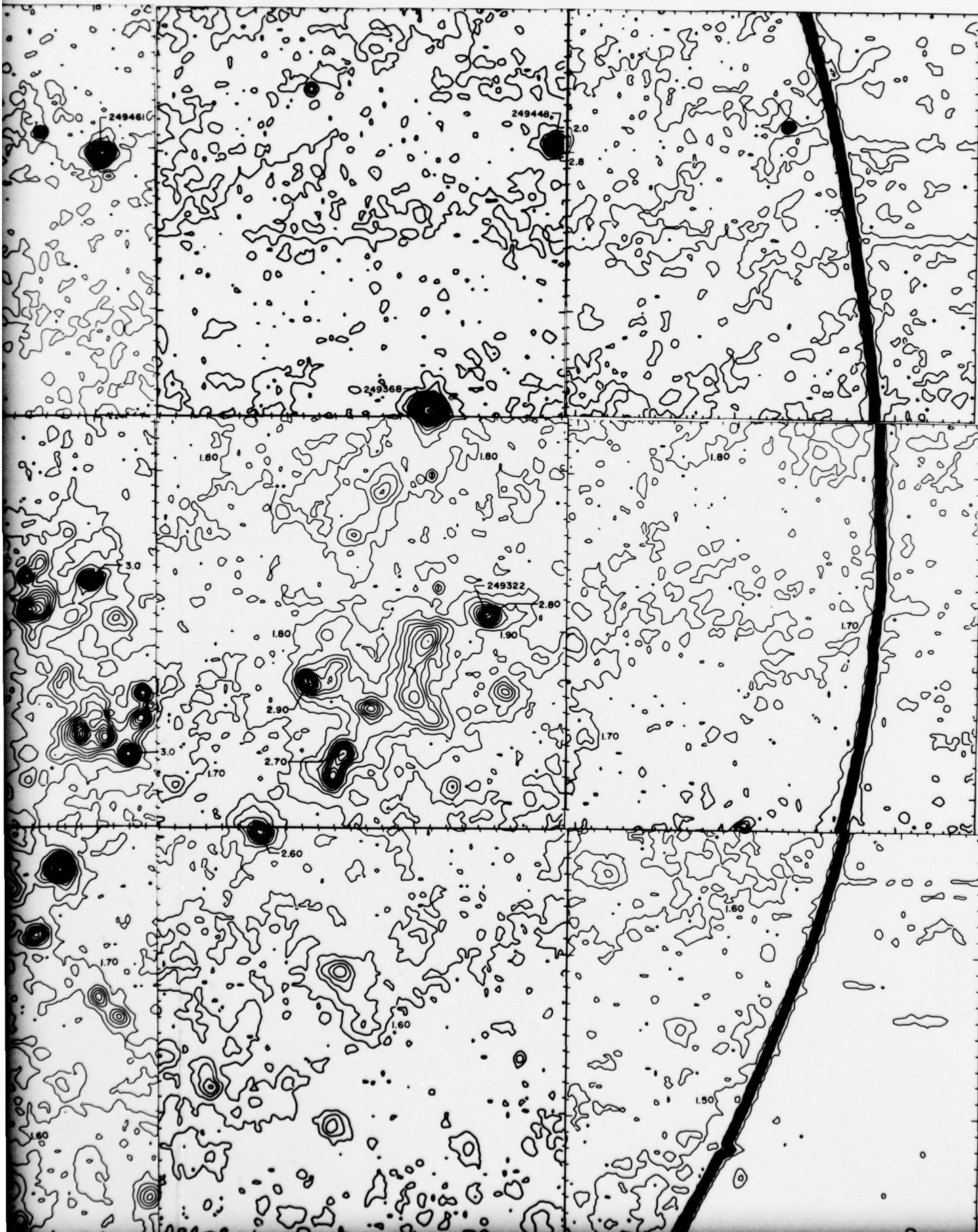


ervals of 0.05D on frame A124, 1-min exposure, ILi (1050 to 1600 Å)

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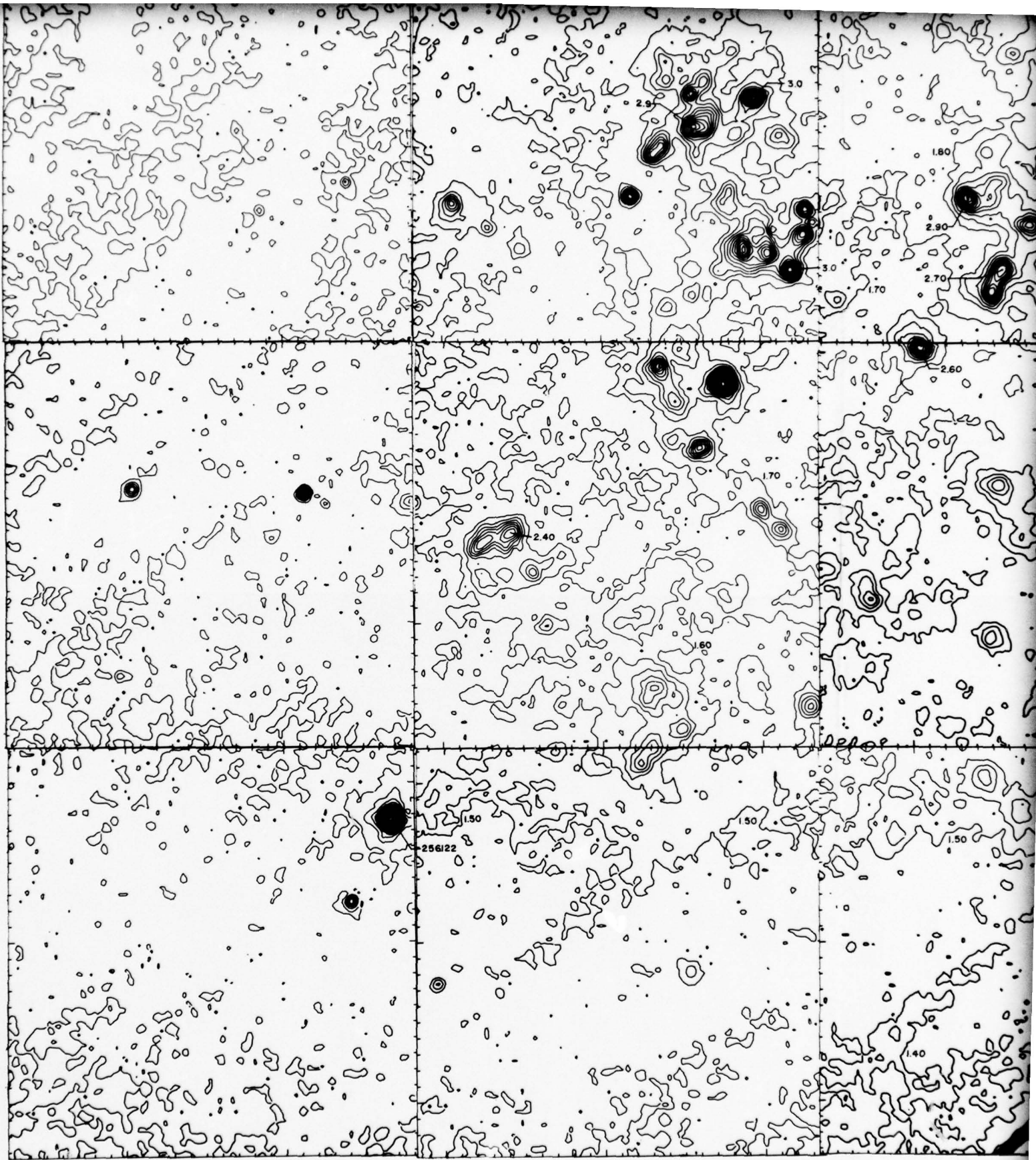
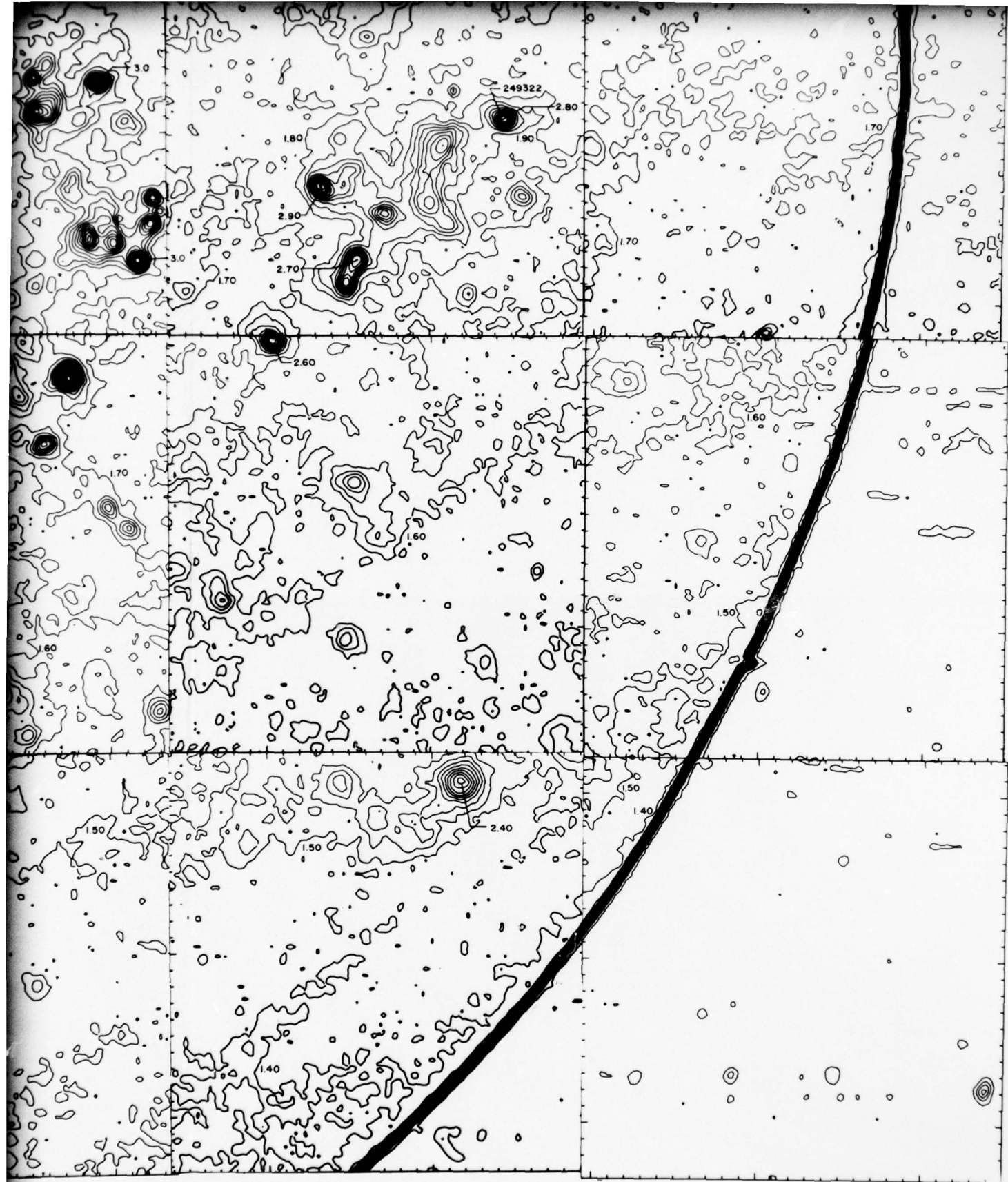
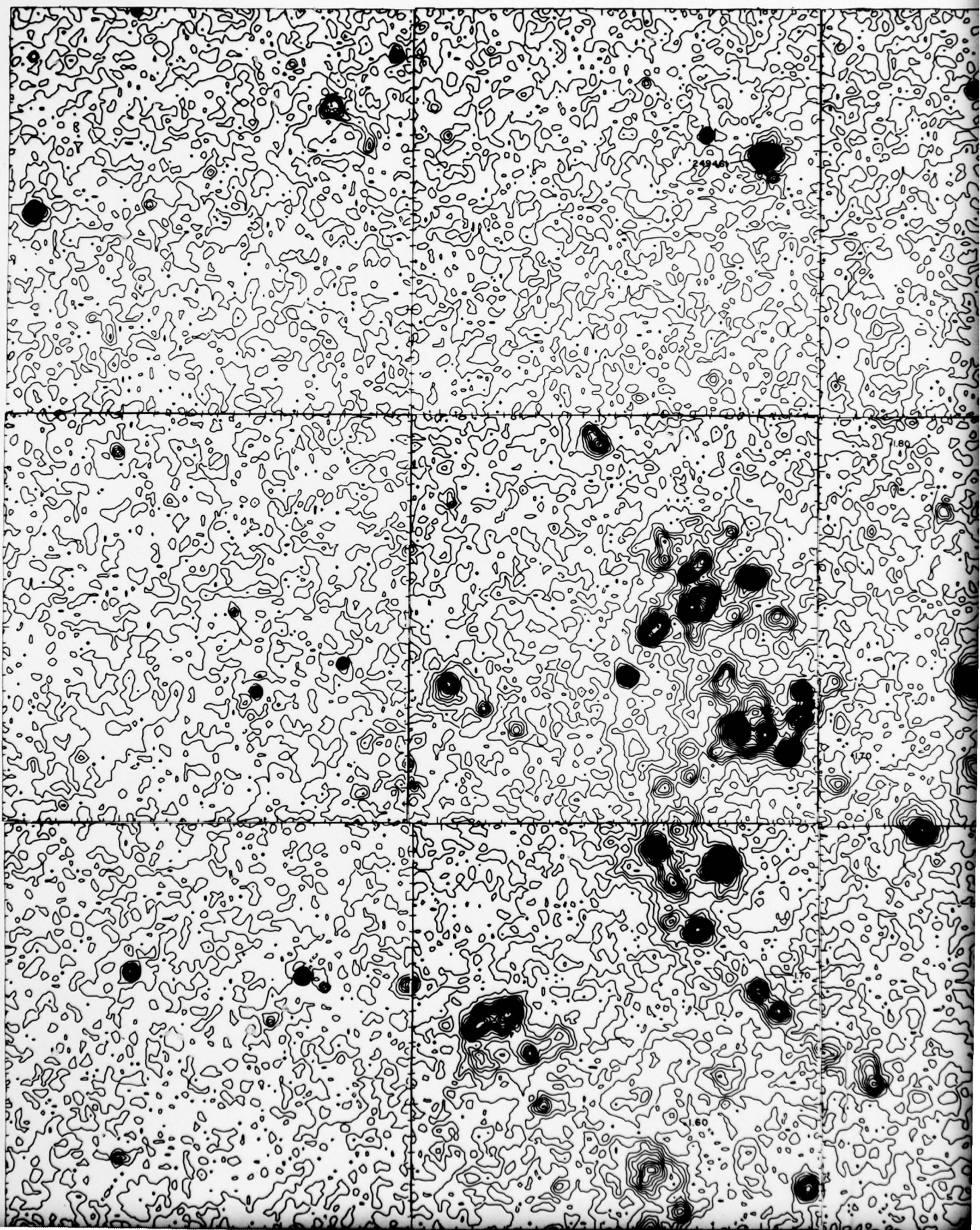
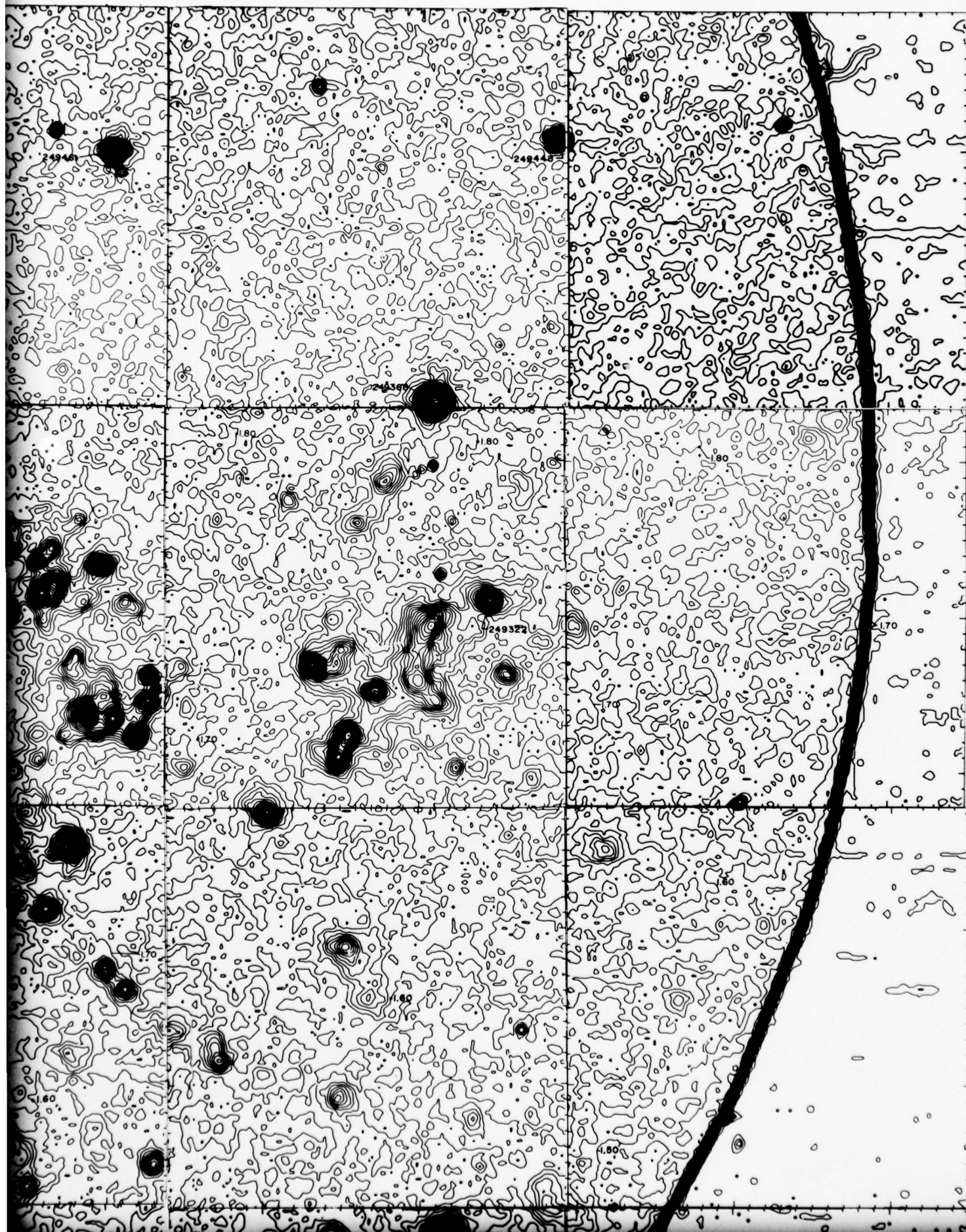


Fig. 5 — Density contours at intervals of 0.10D on frame A125, 3-min exposure, II



at intervals of 0.10D on frame A125, 3-min exposure, ILi (1050 to 1600 Å)





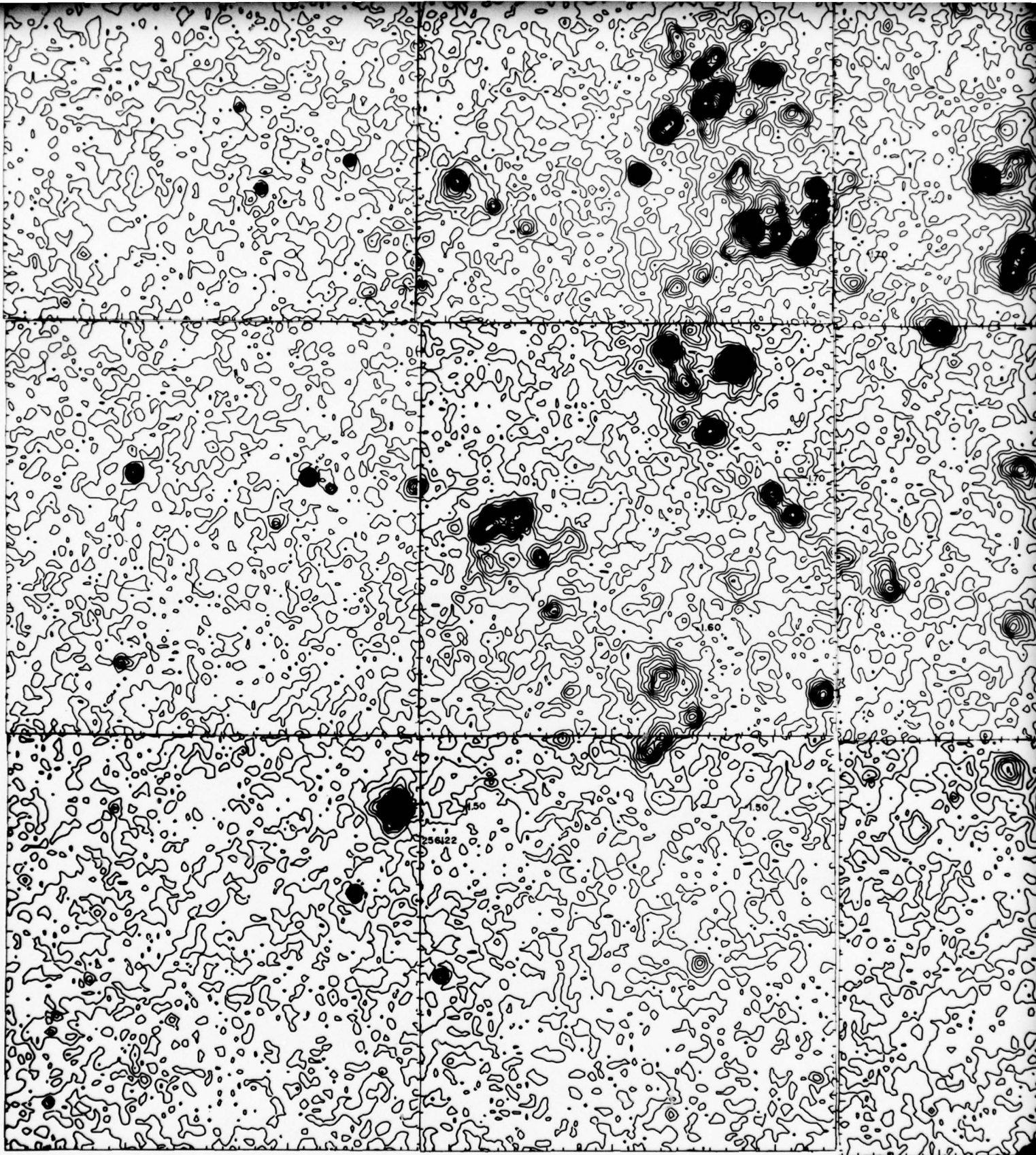
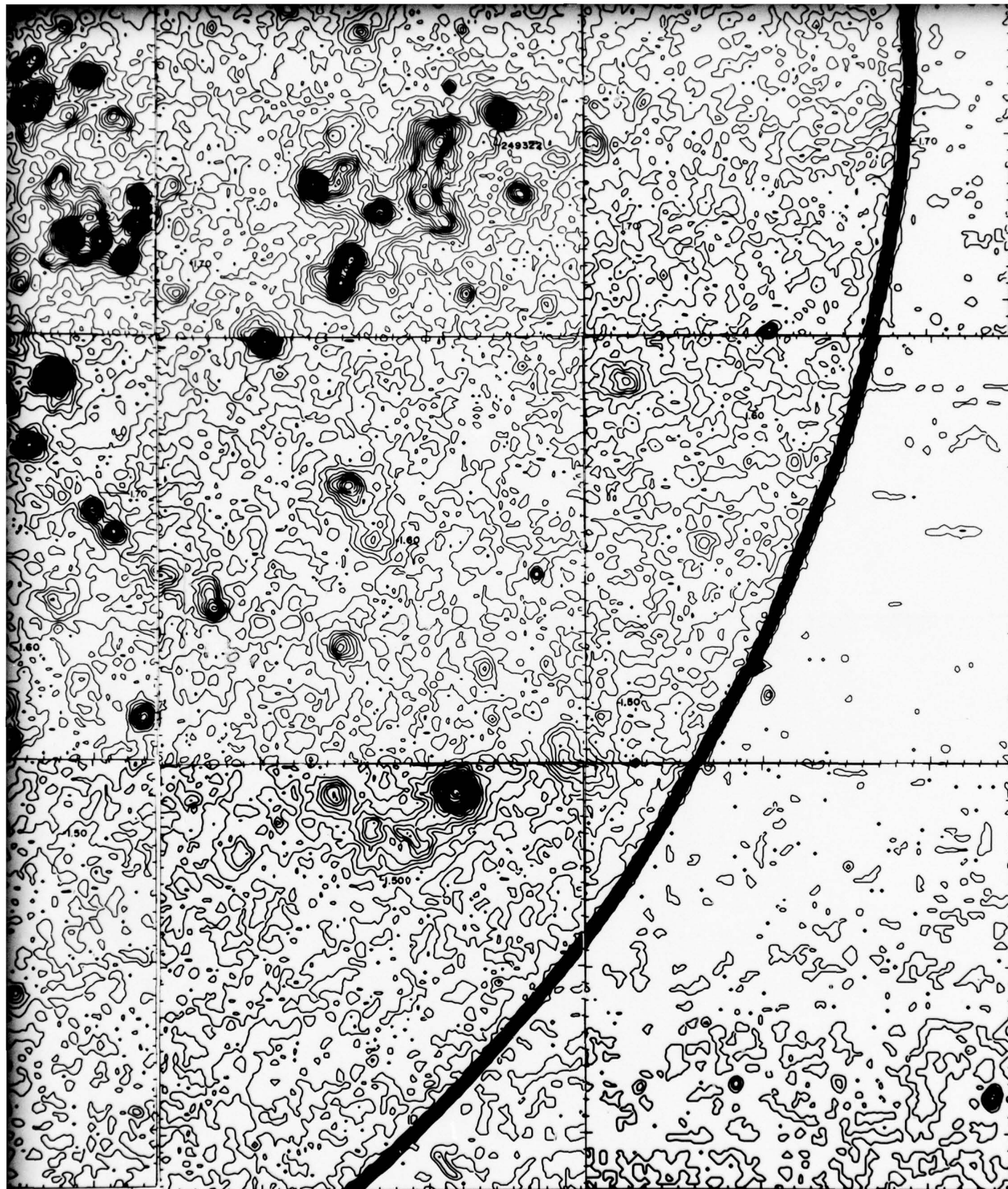
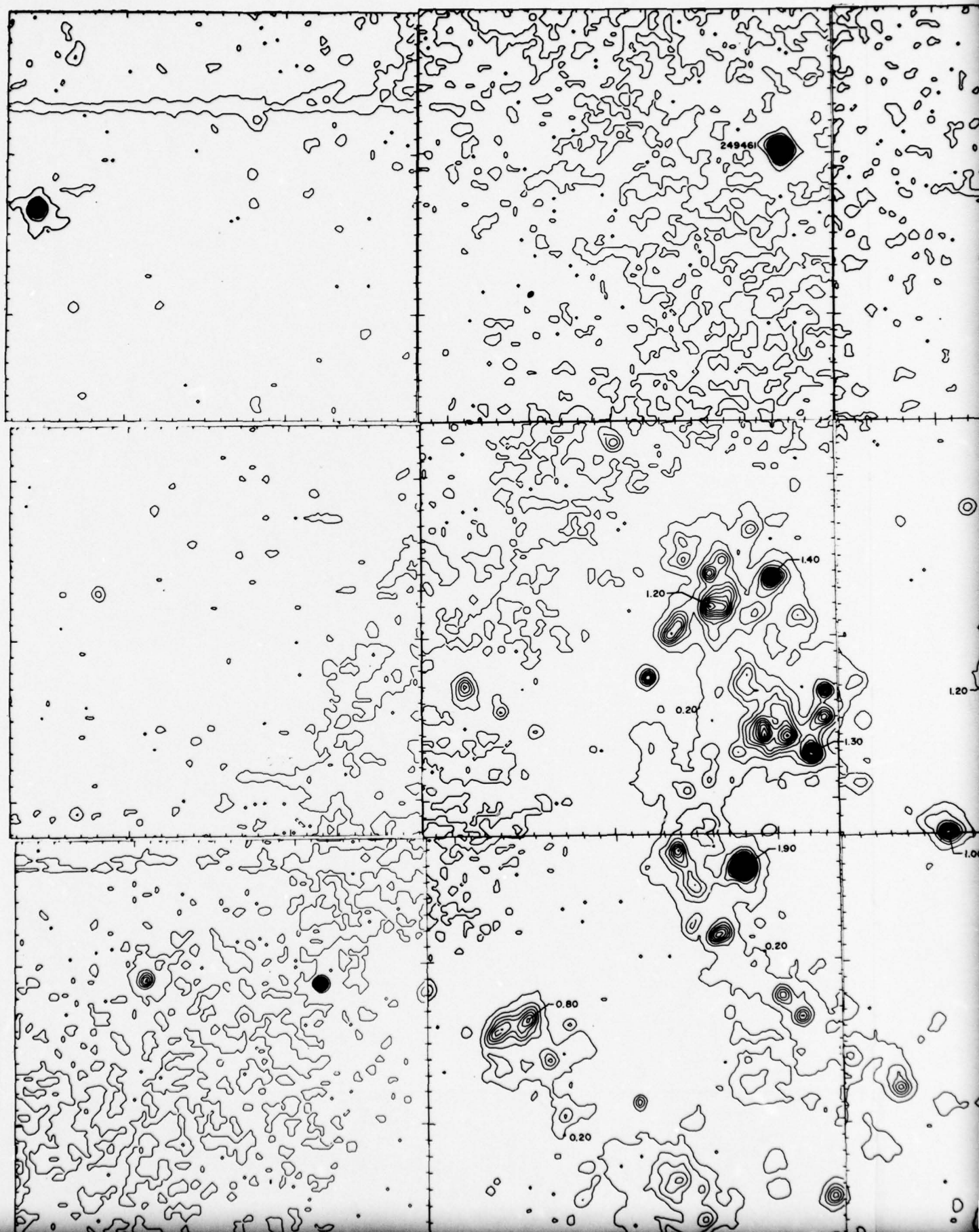


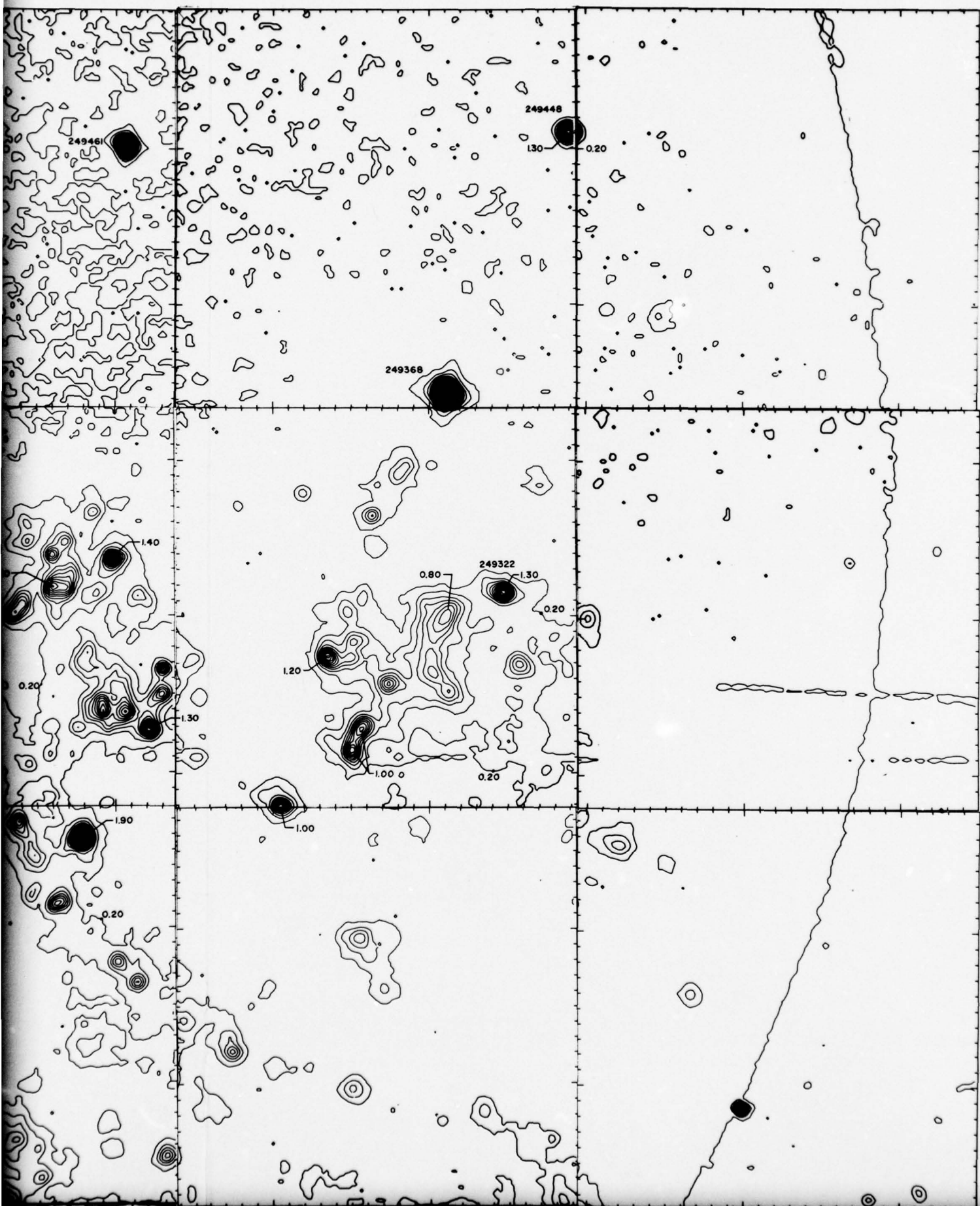
Fig. 6 — Density contours at intervals of 0.05D on frame A125, 3-min exposure, IL



Intervals of 0.05D on frame A125, 3-min exposure, ILi (1050 to 1600 Å)

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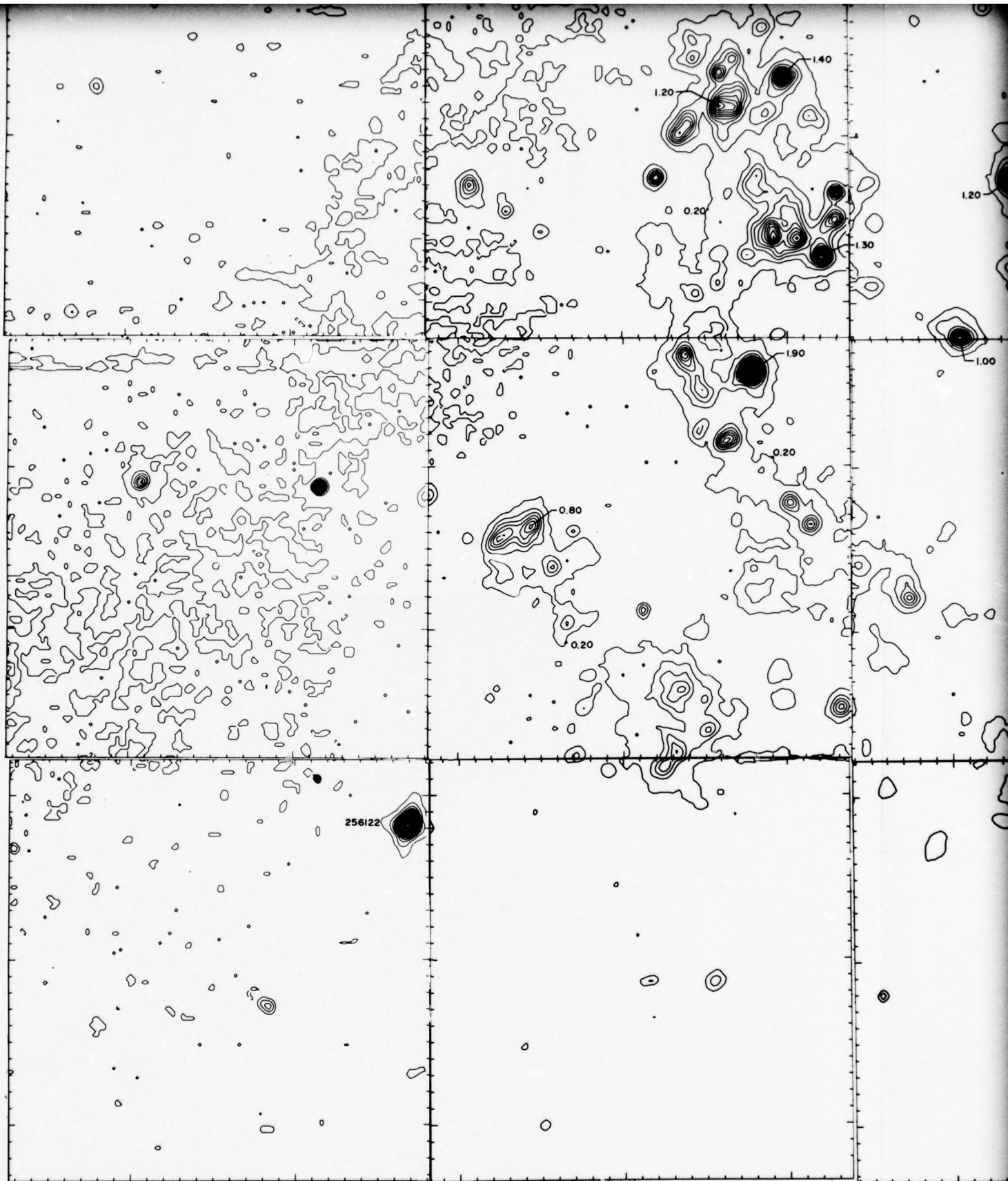
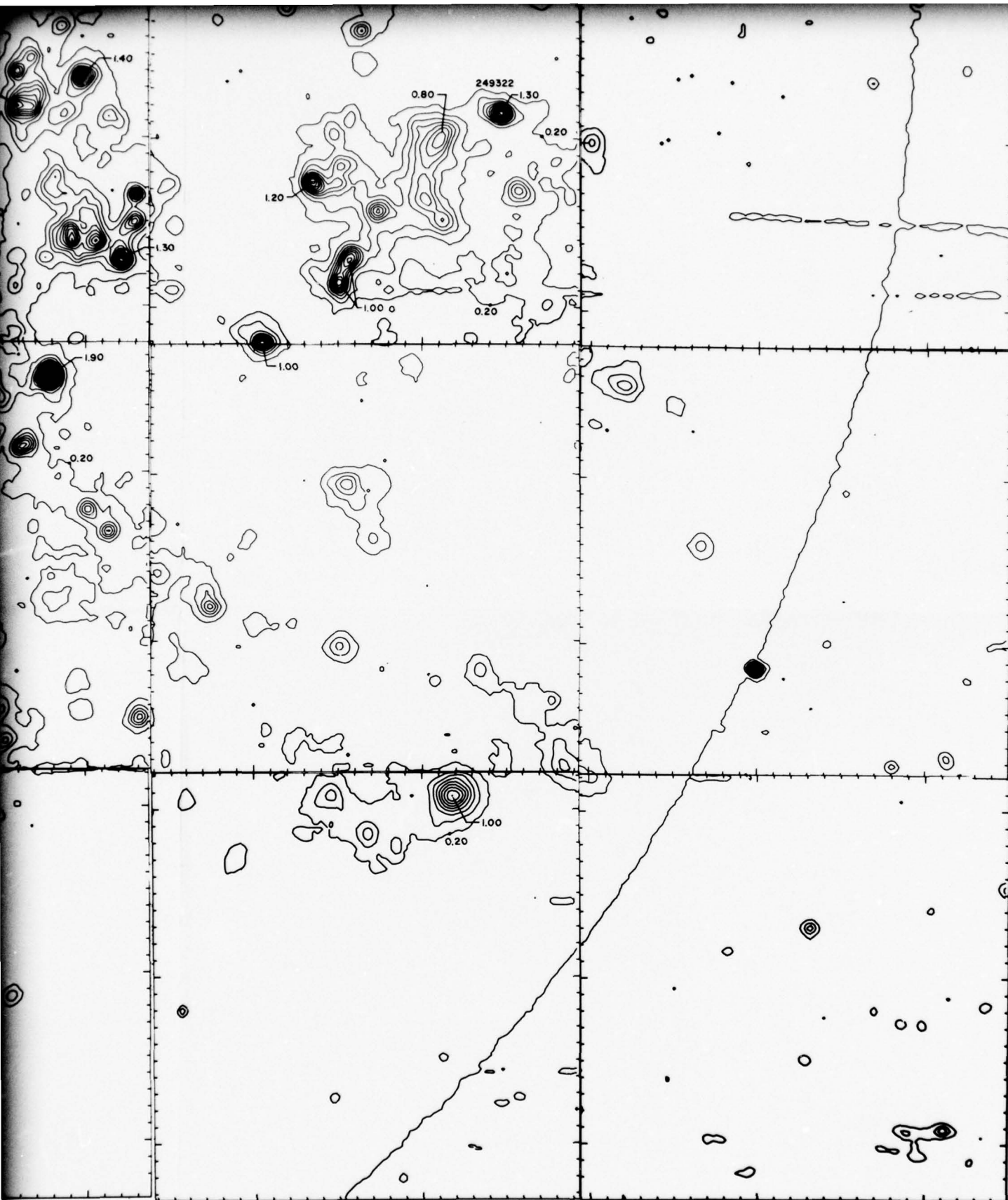


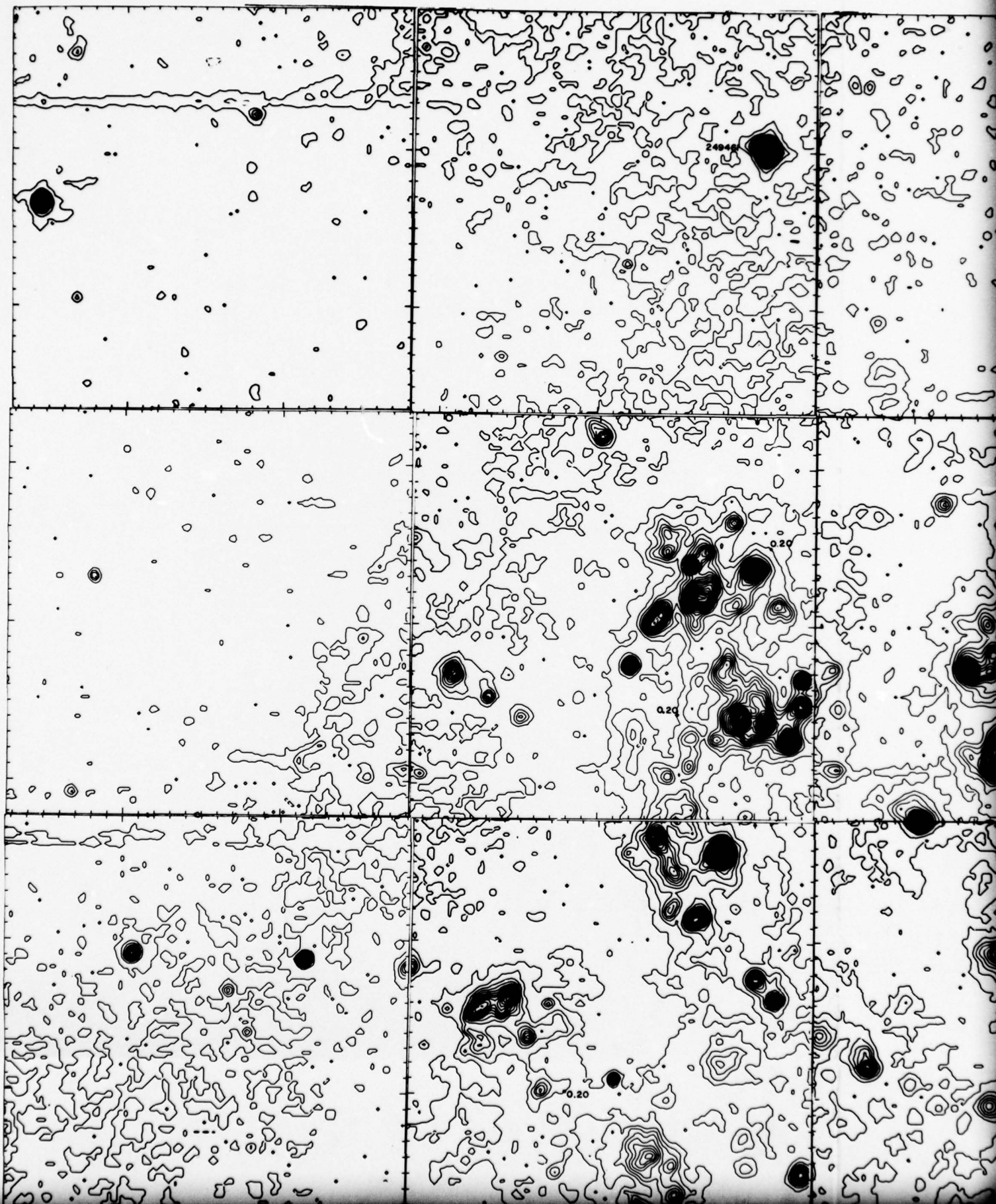
Fig. 7 — Density contours at intervals of 0.10D on frame A128, 3-min exp

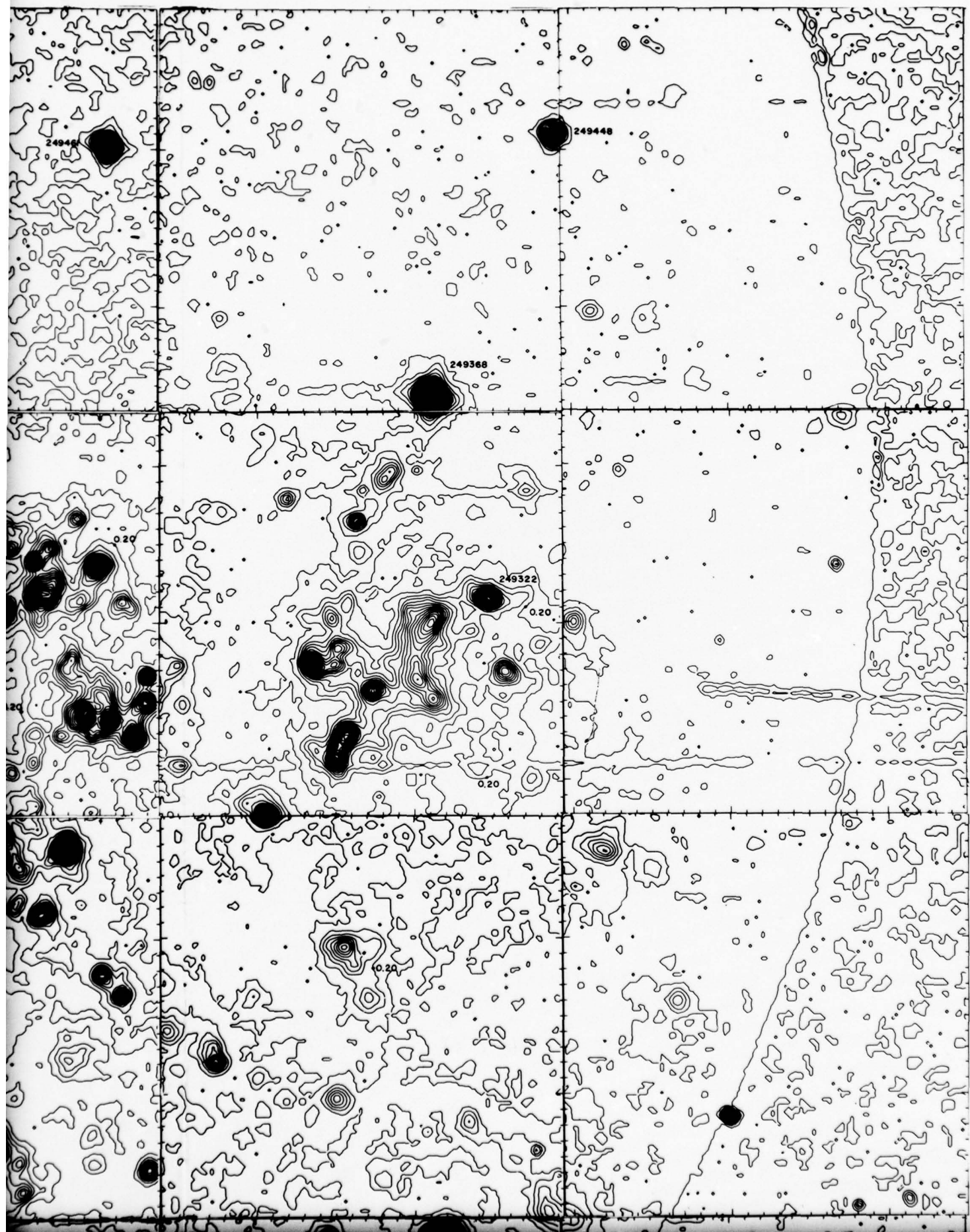


Intervals of 0.10D on frame A128, 3-min exposure, ICa (1250 to 1600 Å)

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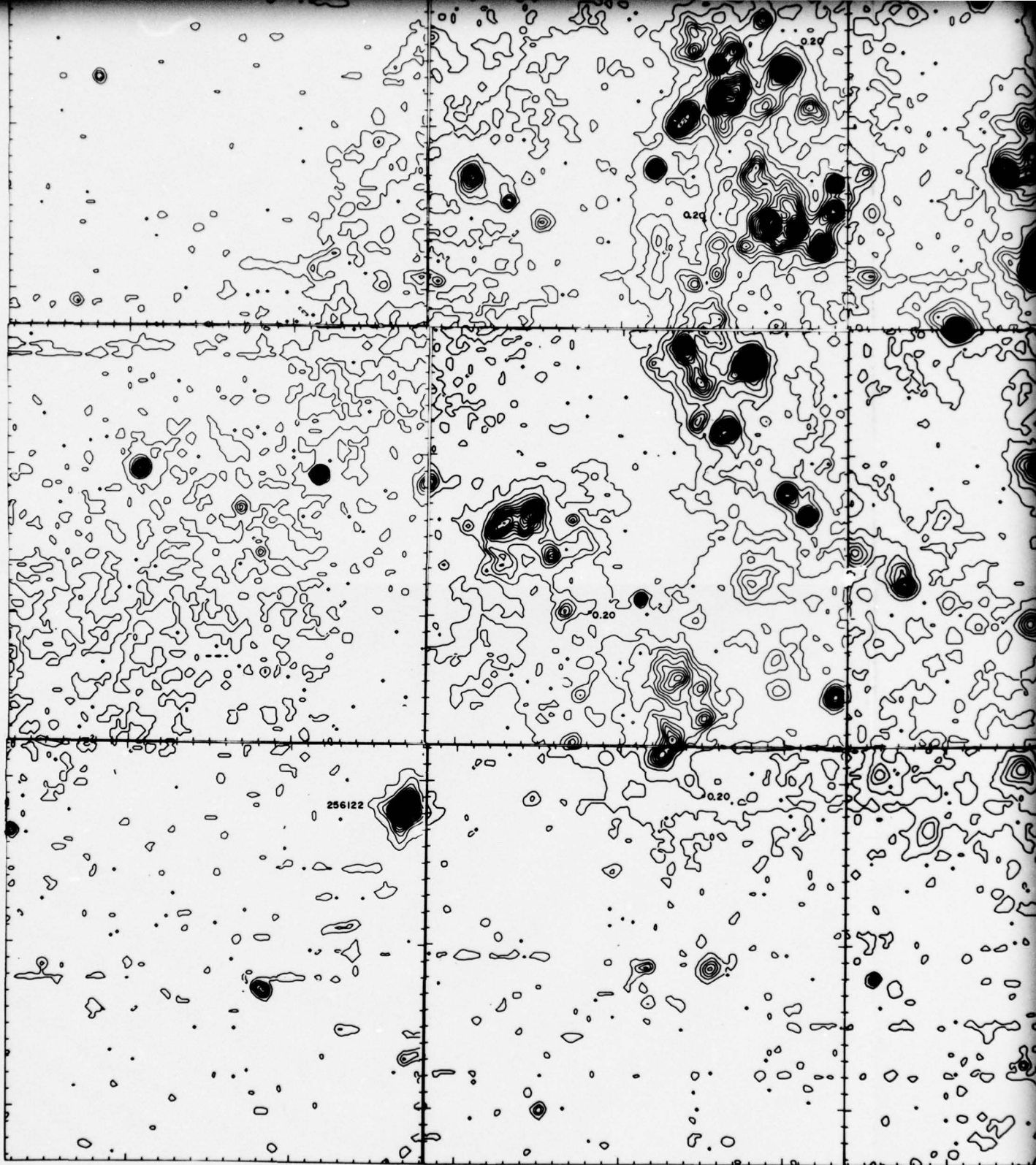
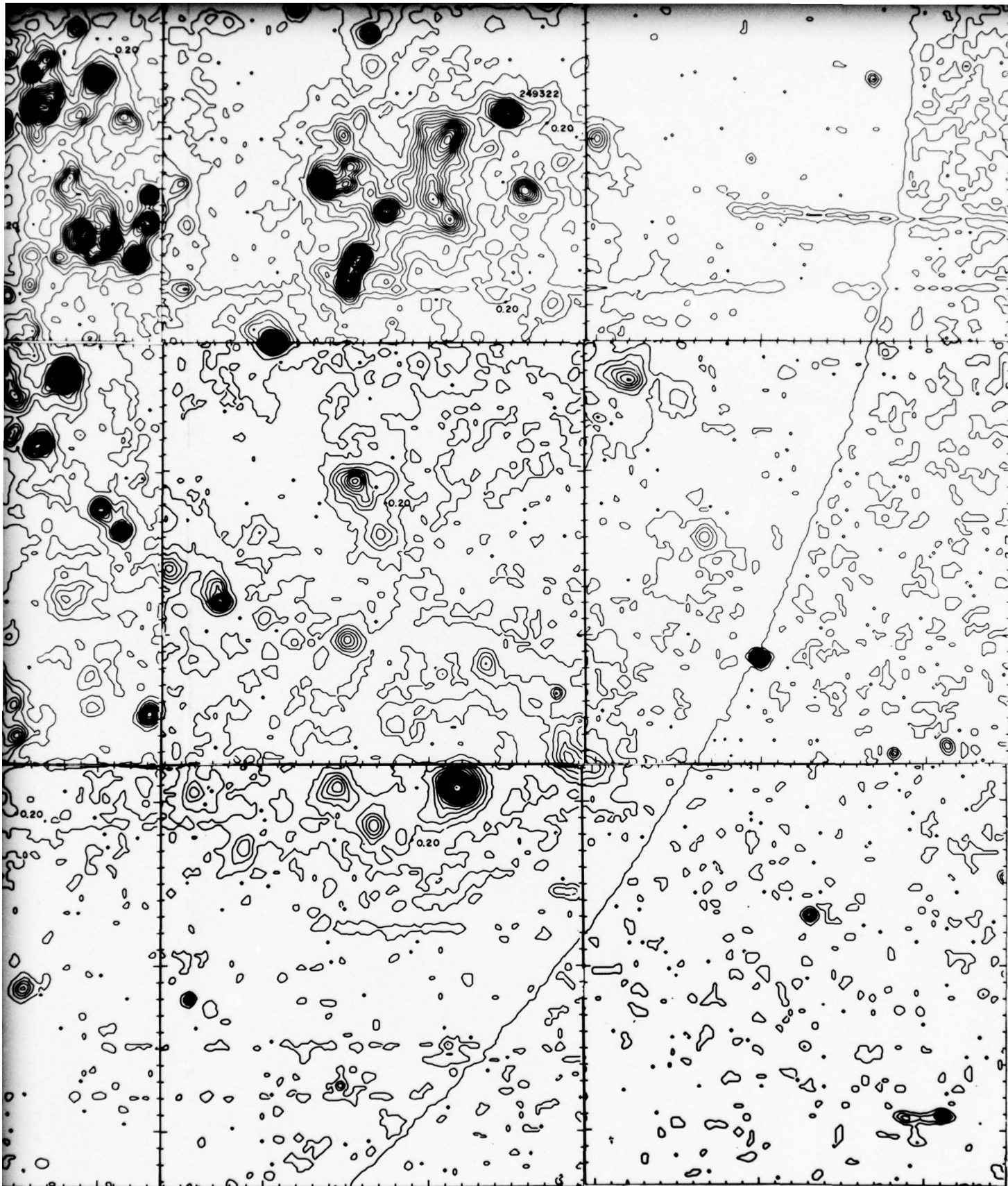
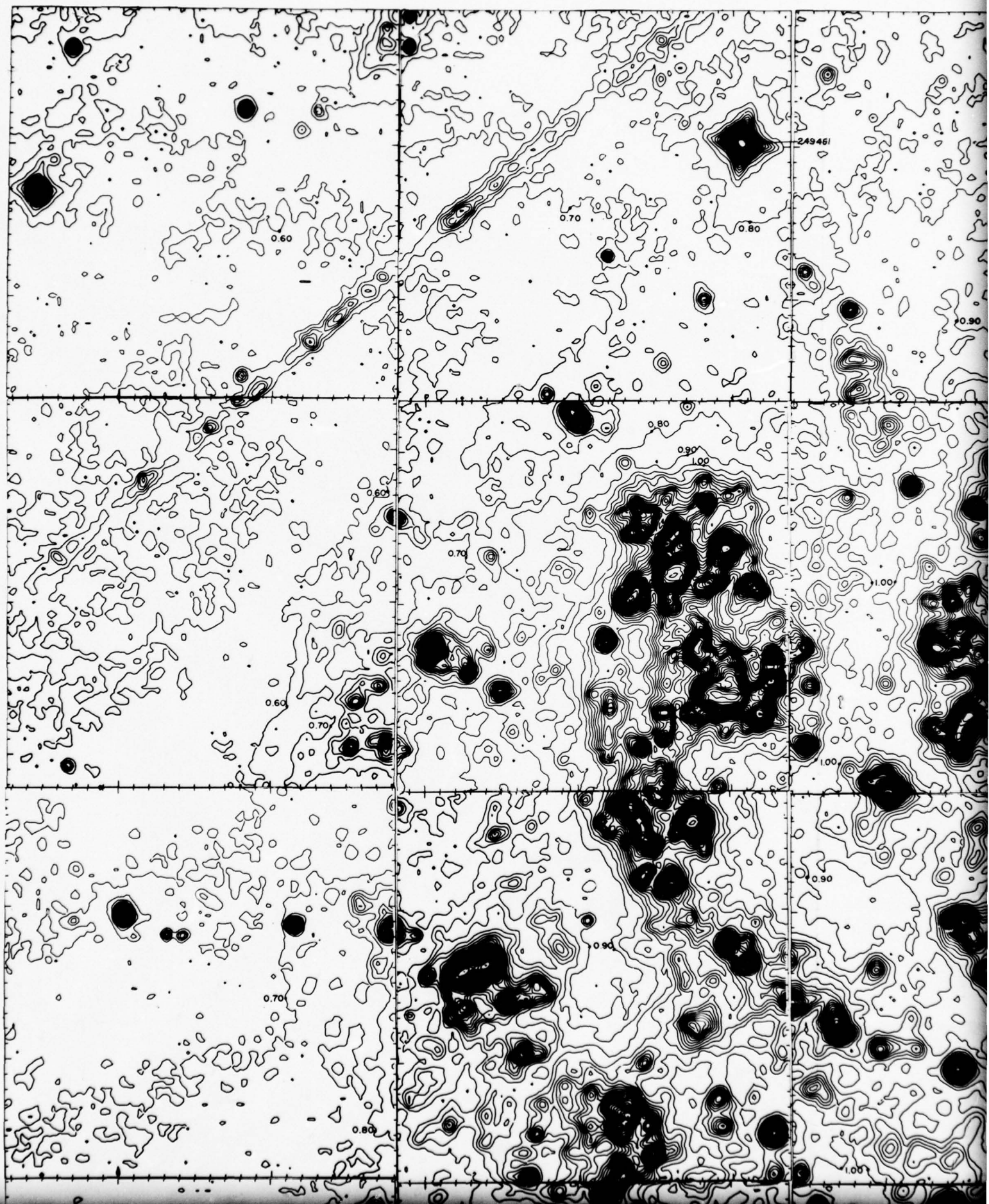
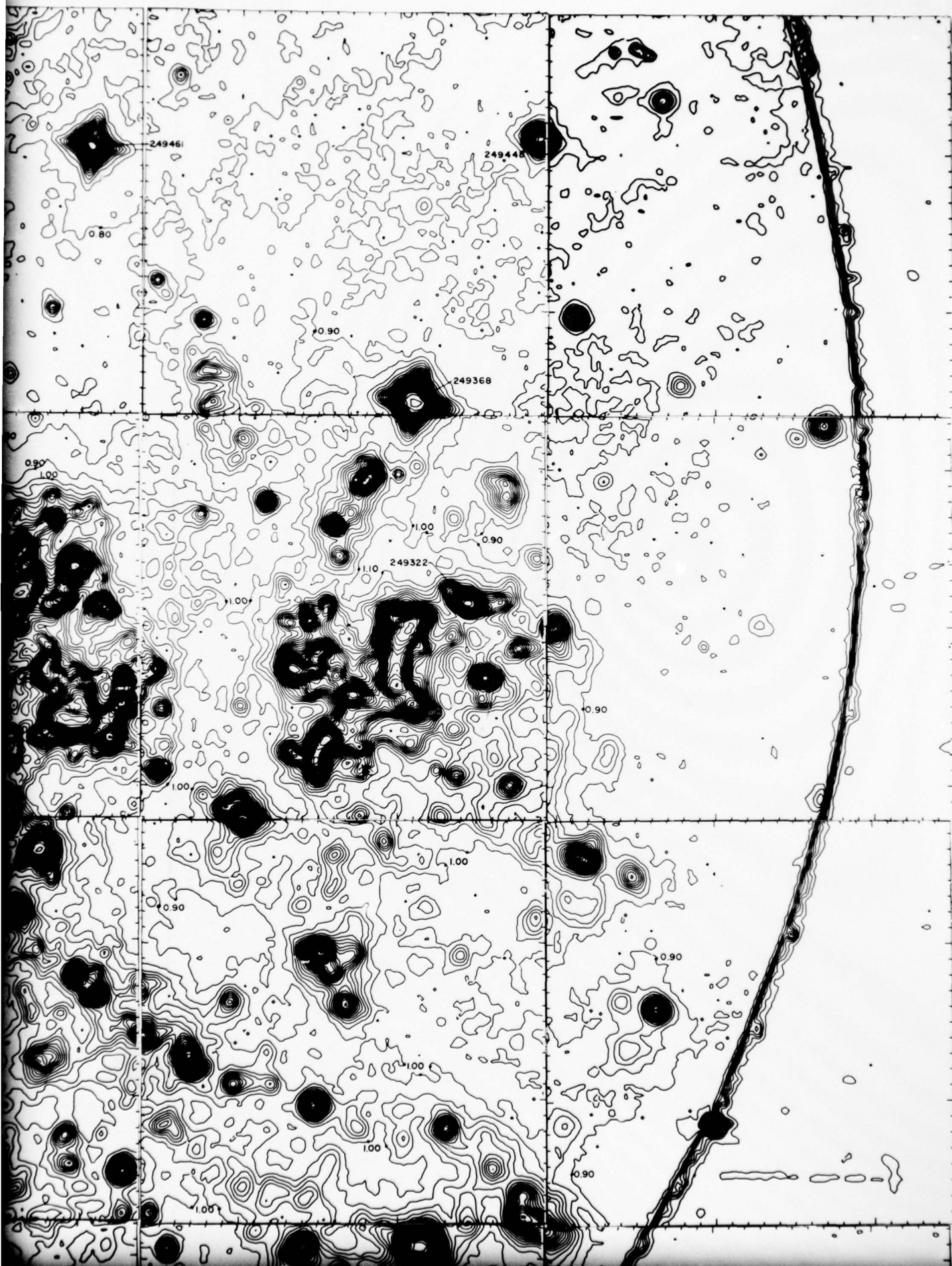


Fig. 8 — Density contours at intervals of 0.05D on frame A128, 3-min exposure.



Intervals of 0.05D on frame A128, 3-min exposure, ICa (1250 to 1600 Å)





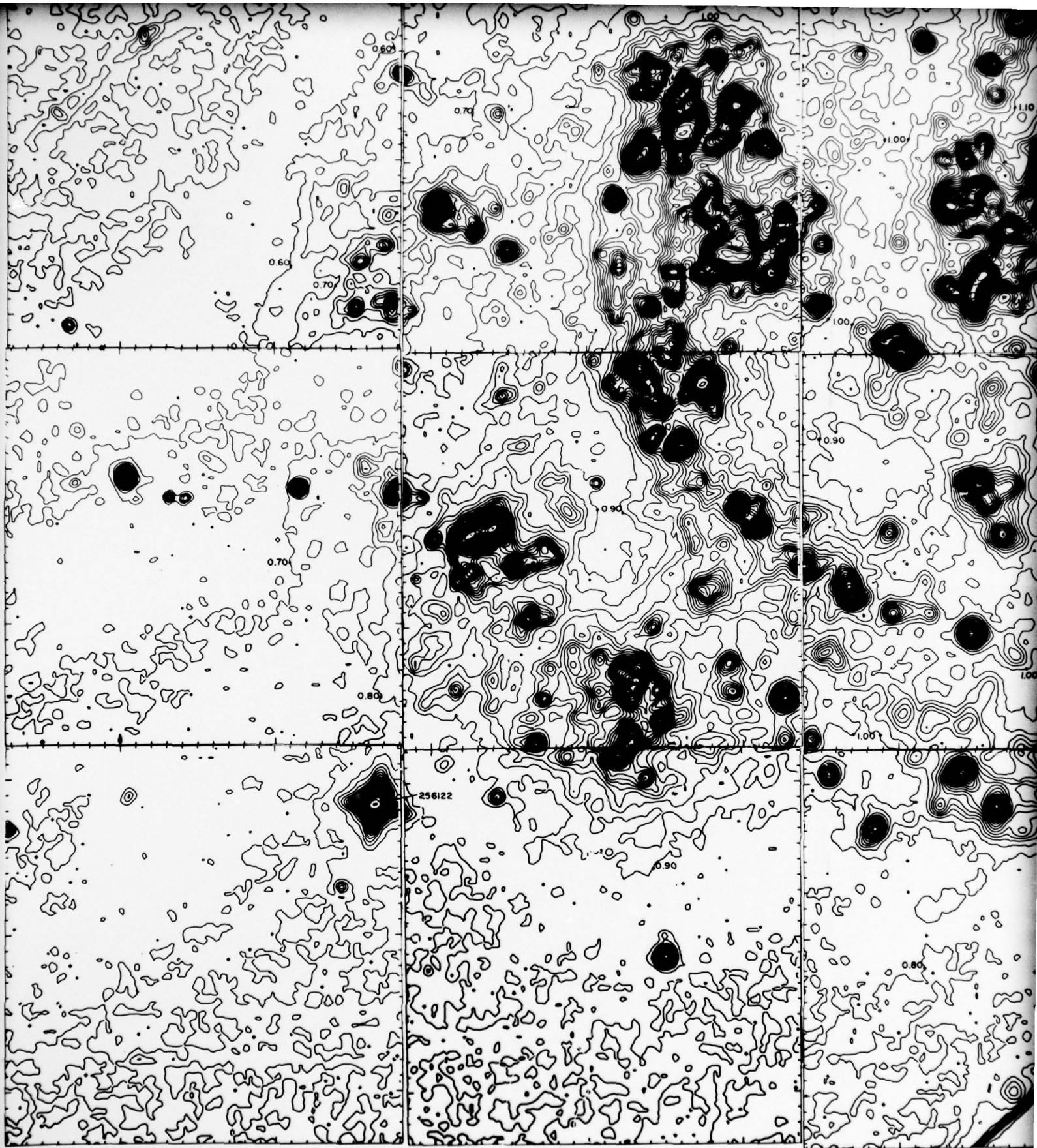
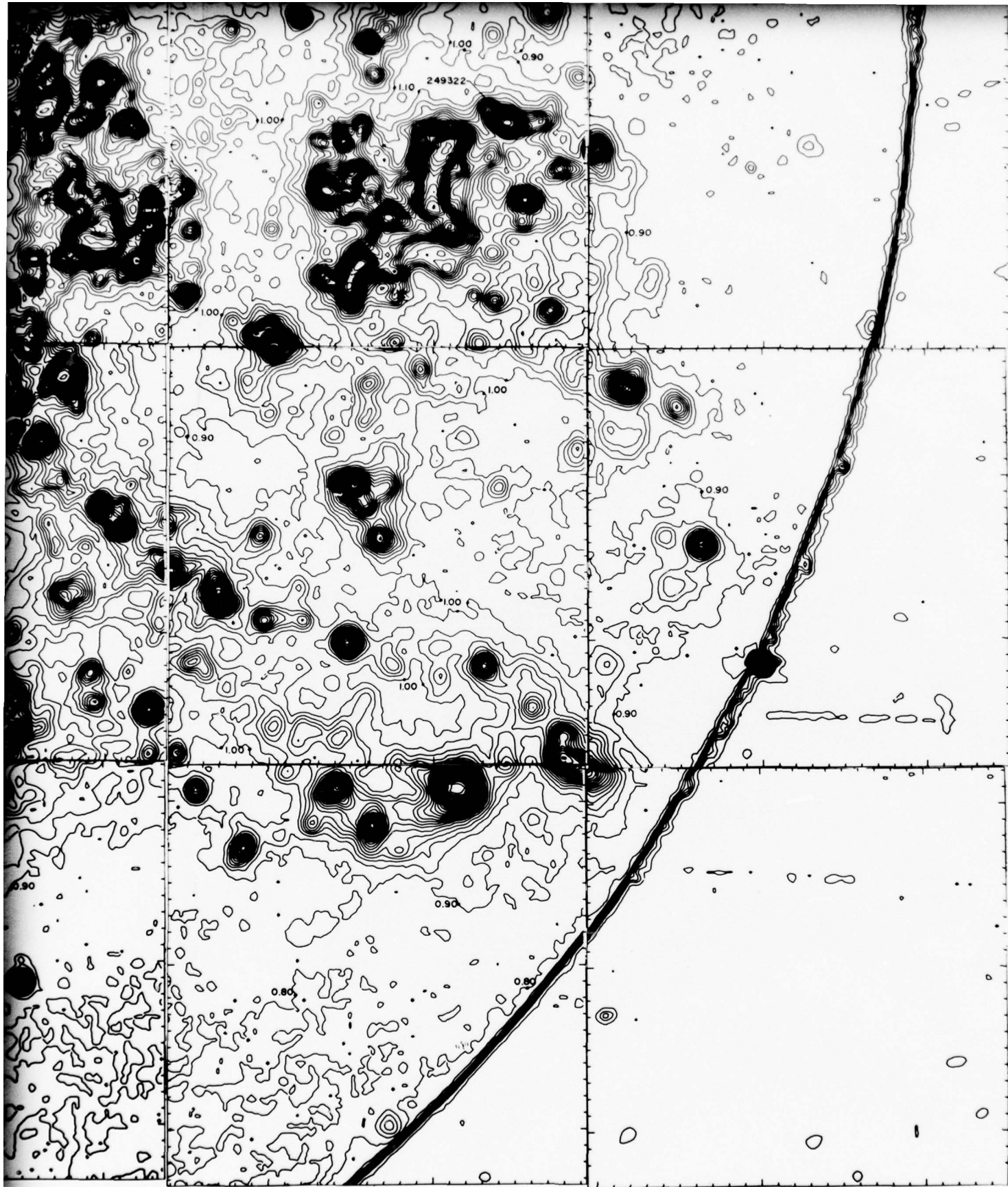


Fig. 9 — Density contours at intervals of 0.10D on frame A130, 30-min exposure, ICa (11



Intervals of 0.10D on frame A130, 30-min exposure, ICa (1250 to 1600 Å)

4

density gradient). As noted in the S201 Catalog [7], this correction for nonlinearity of the density-exposure relation was determined from measurements of uniform geocorona densities on three Earth-imagery frames, with exposure times of 1, 3, and 10 min. The linearized density is closely represented by

$$D_L = D_M + \exp[0.674 (D_M - 130)^{0.39}],$$

where D_M is the measured density ($\times 100$).

For any identifiable image, the integrated intensity can be determined by summing the density volume $V = \Sigma(D_L - B_L)$, where D_L is the linearized density ($\times 100$) of a pixel in the image under consideration and B_L is the linearized background density ($\times 100$) near, but outside of, the image, with the sum being taken over all pixels within the image. In the LMC, determination of the true background density is particularly difficult because of the multitude of field stars against which a particular association or other object in the LMC must be observed. The density volume divided by the exposure, V/E , is our direct measurement of far-UV flux in each image.

We looked for and detected most of the OB associations cataloged by Lucke and Hodge [19] and many of the emission nebulae cataloged by Henize [17]. This was done by converting the catalog positions (right ascension and declination) to scan coordinates (x, y) and then plotting a rectangle ($\Delta x, \Delta y$) to match the cataloged size of the association or nebula. These rectangles often overlapped but generally fell on or near a density maximum. The local background was determined by averaging the edge densities on each of the four sides of the rectangle $\Delta x \Delta y$.

In a few cases (Lucke-Hodge catalog numbers LH29, 34, 77, 107, 116, and 120) the area described by Lucke and Hodge [19] is not approximated by a simple north-south or east-west rectangle. In these cases the area summed on the D_L mosaic is a northeast-southwest rectangle, or some curved shape, and the listed value of Δy (in the *Y column of the listing in Appendix B) is flagged with an asterisk. In all cases the areas summed for a given Lucke-Hodge (LH) association were made to correspond to the same celestial coordinates on each of the four frames, and the backgrounds were estimated in the same way on each.

In addition to these LH associations and Henize nebulae, over 130 other density peaks were noted on D_L mosaics of each of the four frames A124, A125, A129, and A130. When these peaks occurred at nearly the same position on two or more frames, they are clearly foreground stars, additional OB associations in the LMC not listed by Lucke and Hodge, or perhaps individual hot luminous LMC stars. Twenty of these are readily identified as foreground stars (four of them heavily overexposed) listed in the SAO catalog [24]. For all of these density peaks the background was determined by noting the first minimum in D_L in each of four directions on the mosaic ($+x, +y, -x, -y$) and taking the average as B_L . The image "edge" was then taken at $B_L + 10$, with no image smaller than $\Delta x = 2, \Delta y = 2$. The measured density volume is then $V = \Sigma(D_L - B_L)$ inside this "edge." Because these density volumes have been linearized, they are much larger in Appendix B than values listed in the S201 Catalog [7].

It was to be expected that frame A124, with the lowest exposure, would miss some of the fainter objects and that high background on frames A125 (3-min ILi exposure) and A130 (30-min ICa exposure) would obscure some of the objects. Moreover the correction

for nonlinear response is unreliable for $D_L > 600$. Values of V that include $D_L > 600$ are therefore flagged (by an asterisk in the V/E column of Appendix B). Those values of V may be too low. Table 1 gives the statistics on all images listed in Appendix B. We consider that 110 of the 122 LH associations, 110 of the 221 Henize nebulas (including nine lettered "subnebulas"), 16 of the 20 SAO stars (of types B5 to A5), and 130 unidentified objects have reliable density volumes V listed in Appendix B.

Table 1 — Statistics of the Number of Far-UV Objects Measured in the LMC

| | Frame A124 | Frame A125 | Frame A129 | Frame A130 |
|---|------------|------------|------------|------------|
| Total objects listed | 429 | 439 | 443 | 444 |
| Objects with $V < 0$ | 15 | 16 | 20 | 19 |
| Objects with $V < 10$ | 88 | 58 | 59 | 46 |
| Objects measured <i>reliably</i> | 338 | 376 | 378 | 315 |
| Background range | 70-123 | 170-382 | 30-296 | 70-917 |
| Lucke-Hodge associations with $V > 0$ | 117 | 117 | 112 | 114 |
| Lucke-Hodge associations with $V > 10$ | 110 | 112 | 110 | 112 |
| Lucke-Hodge associations with $V > 10$ and peak density $P < 600$ | 110 | 112 | 109 | 73 |
| No. of Henize nebulas measured | 157 | 157 | 157 | 157 |
| Henize nebulas with $V > 0$ | 139 | 145 | 145 | 145 |
| Henize nebulas with $V > 10$ | 84 | 108 | 108 | 121 |
| Nebulas with $V > 10$ and $P < 600$ | 84 | 108 | 107 | 95 |
| SAO stars with $V > 0$ | 19 | 19 | 19 | 20 |
| SAO stars with $V > 10$ | 17 | 19 | 19 | 20 |
| SAO with $V > 10$ and $P < 600$ | 16 | 16 | 16 | 11 |
| Unidentified objects | 110 | 118 | 123 | 124 |
| Unidentified objects detected on more than one of the four frames | 133 | | | |
| Unidentified objects detected on two frames | 23 | | | |
| on frames 124 and 125 | 9 | | | |
| on frames 129 and 130 | 13 | | | |
| Unidentified objects detected on three frames | 11 | | | |
| on frames 124, 129, and 130 | 1 | | | |
| on frames 125, 129, and 130 | 10 | | | |
| on frames 124, 125, and 130 | 1 | | | |
| Unidentified objects detected on all four frames | 99 | | | |

In several cases, two or more LH associations or Henize nebulas are grouped around a density peak, and the measured background is sloping steeply across each area. In these cases the areas have been combined (for example, LH9, 10, and 13 in Appendix B) and a new, lower background has been determined for the group. The individual areas sometimes give negative V in such cases of sloping background, as noted in Table 1, Table 2, and Appendix B.

Figures 10 through 13 give our best estimates of the background densities on frames A124, A125, A129, and A130. In regions of irregular background, small areas ($\Delta x \Delta y$) give

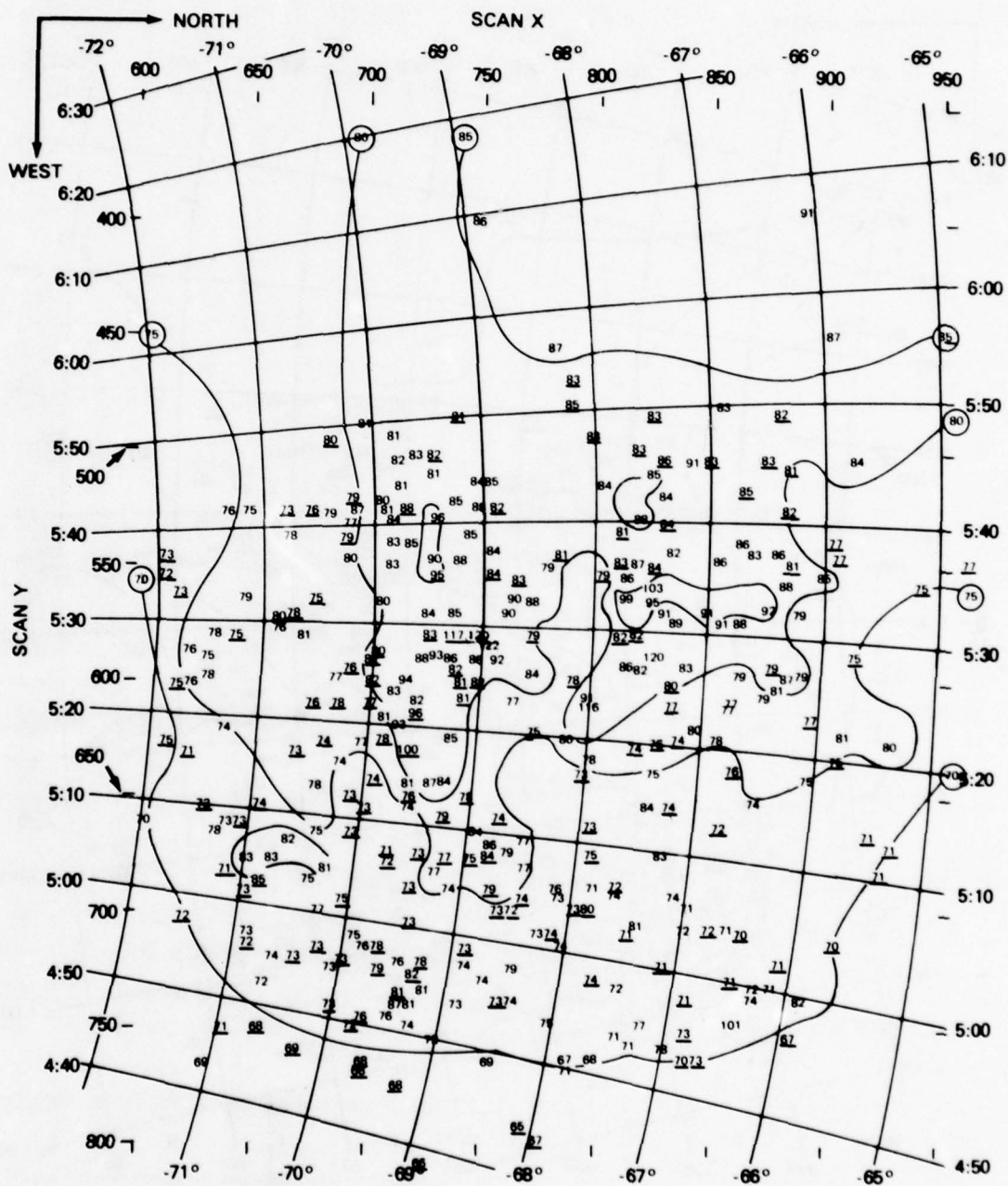


Fig. 10 — Contour plot of background densities on frame A124, used in computing measured density-volumes in the LMC, 1050 to 1600 Å. Values for $\Delta x \Delta y = 2 \times 2$ are underlined. The orientation is as shown in Fig. 2 (north to the right and east up). The $\alpha\delta$ grid is irregular because of S201 camera distortion.

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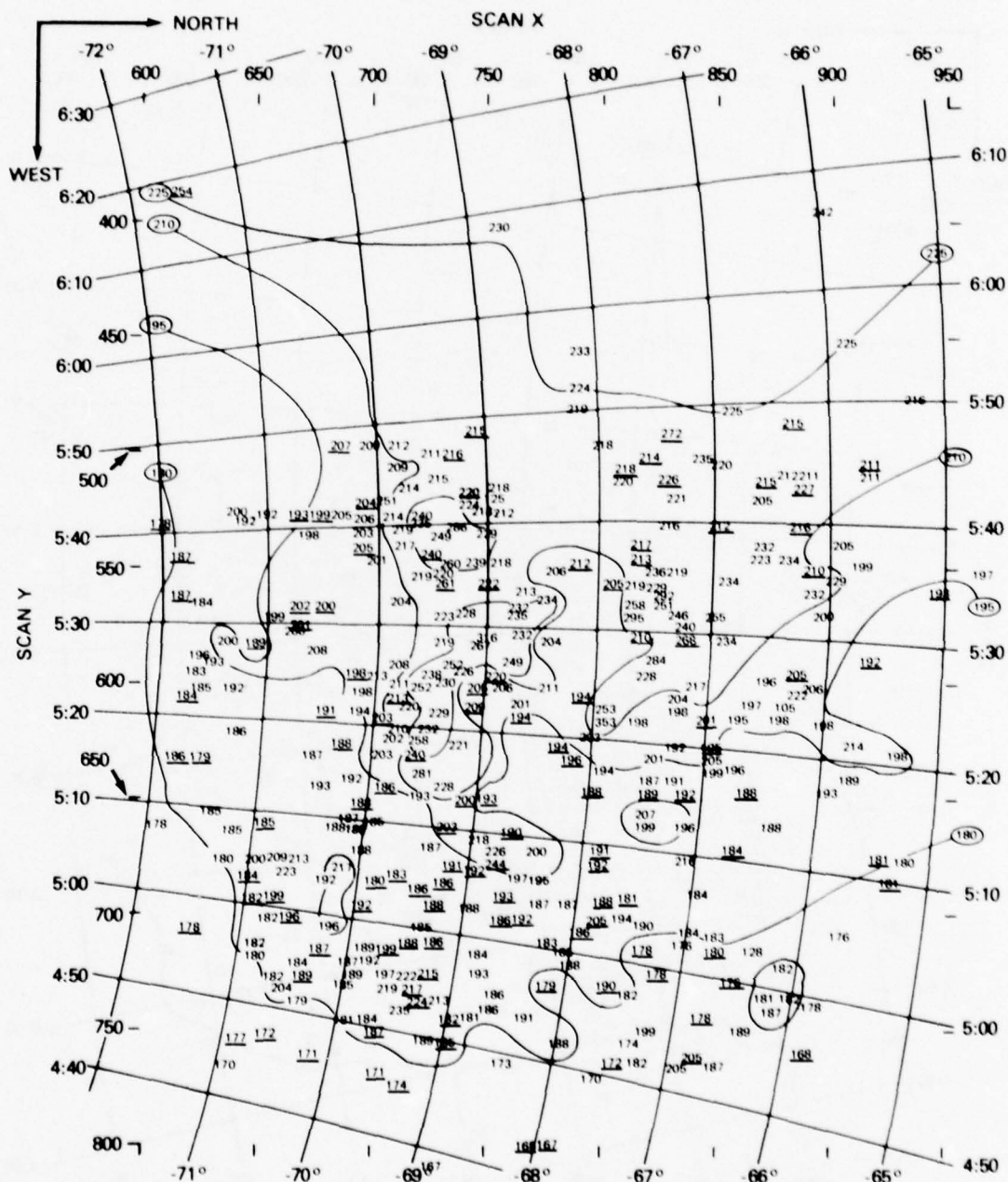


Fig. 11 — Contour plot of background densities on frame A125, used in computing measured density-volumes in the LMC, 1050 to 1600 Å. Values for $\Delta x \Delta y = 2 \times 2$ are underlined.

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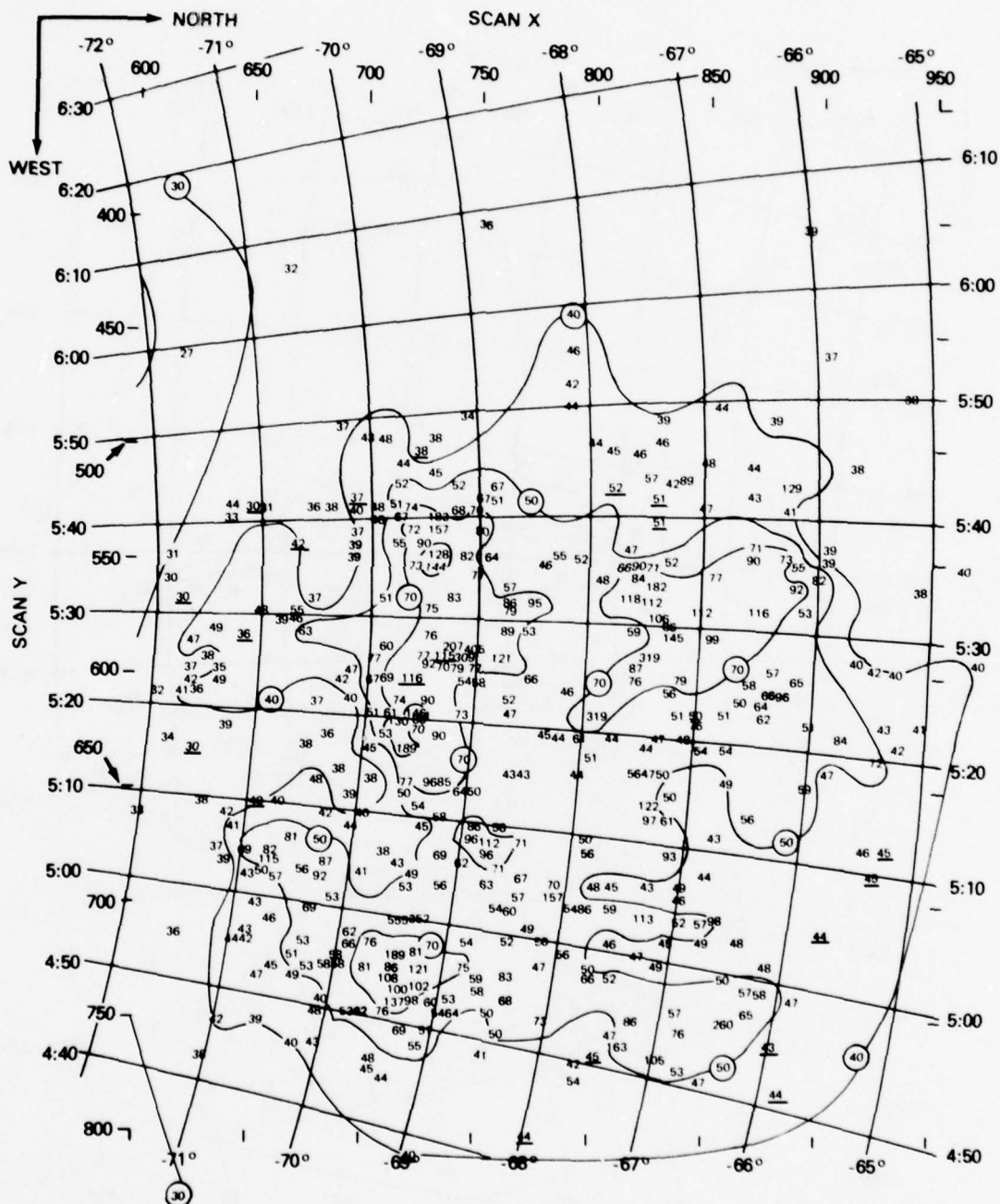


Fig. 12 — Contour plot of background densities on frame A129, used in computing measured density-volumes in the LMC, 1250 to 1600 Å. A few values for $\Delta x \Delta y = 2 \times 2$ are underlined; the rest are not plotted.

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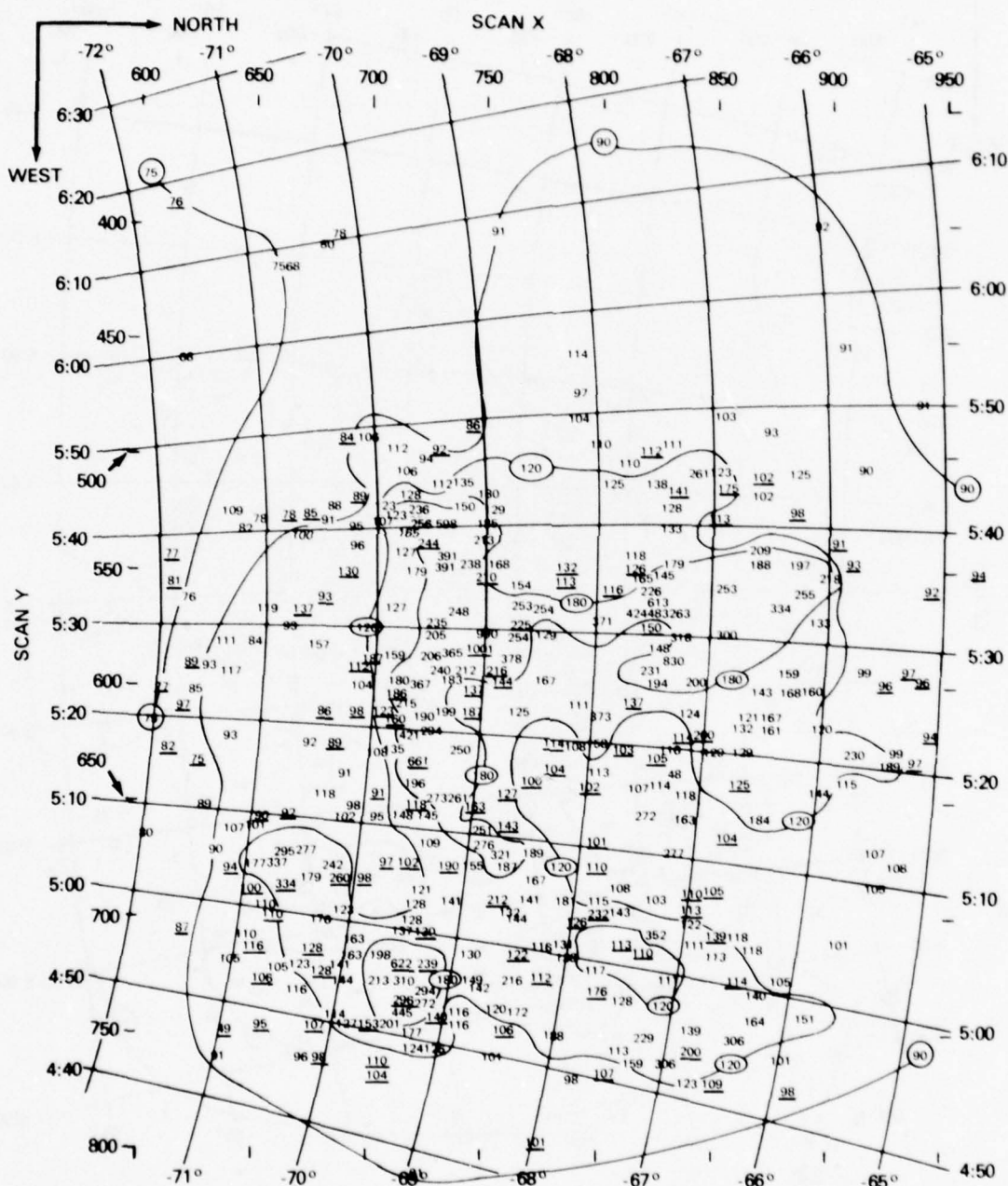


Fig. 13 — Contour plot of background densities on frame A130, used in computing measured density-volumes in the LMC, 1250 to 1600 Å. Values for $\Delta x \Delta y = 2 \times 2$ are underlined.

unnaturally high B_L , and large $\Delta x \Delta y$ gives lower than average B_L . If these are ignored, the contour lines show the general pattern of B_L on each frame. Although the patterns are similar, they are not entirely consistent with the exposure times (1 and 3 min on frames A124, and A125; 10 and 30 min on frames A129 and A130). This reveals that neither our correction for nonlinear response nor our estimates of B_L are precise.

The measured locations of identified SAO stars on the LMC frames were used, with their known values of right ascension and declination, to compute a transformation grid relating frame coordinates x and y to celestial coordinates α and δ . This (α, δ) grid is plotted in Fig. 2, along with the computed locations of the associations of Lucke and Hodge [19] (LH labels) and the H α emission regions of Henize [17] (N labels). It is seen, particularly from Figs. 2, that there is fairly good (although not perfect) correlation of UV-bright areas with known candidate sources; the mismatch is generally within the expected error of the mapping procedure.

Fig. 14 is a contour plot of the overall interstellar reddening in the LMC, based on interpolation of the measurements of Lucke [20] over the entire LMC, ranging from 0.05 for LH72 and foreground stars to 0.42 for LH89. This is subject to uncertainties, due to lack of knowledge of the small-scale variations of interstellar extinction in areas where it has not been measured. Also, correction of the measured far-UV fluxes for extinction suffer from the probability that the far-UV extinction curve in the LMC differs from the "average" interstellar extinction curve applicable to the local region of our galaxy. Nevertheless we have estimated the correction for extinction in providing the unreddened ultraviolet fluxes, UF, listed in Appendix B.

These ultraviolet fluxes combine the results of Bless and Savage [13] and of Borgman et al. [10] with Lucke's color-excess values and our density volumes in a highly simplified way, which we believe gives suitable values of the "unreddened flux" from blue stars in the LMC. From Bless, Savage, Borgman, et al. we adopt the ratio

$$\frac{E(\lambda 1350 - V)}{E(B - V)} = 4.2,$$

where $E(B - V)$, listed as RE in Appendix B, is Lucke's value plus 0.05 magnitude for foreground color excess (somewhat less than 0.07 magnitude estimated by Borgman et al.). Since $\lambda 1350$ is approximately centered on our ICa passband (1250 to 1600 Å), the extinction for density volumes V measured on frames A129 and A130 (ICa, 10-min and 30-min exposures) is $4.2 E(B - V)$ magnitudes, where $E(B - V)$ is taken from Fig. 14. Thus the unreddened far-UV flux is

$$UF \text{ (on ICa)} = (V/E)10^{0.4(4.2RE)} = (V/E)10^{1.67RE}, \quad (1)$$

where V has been normalized to a 1-min exposure by dividing by the exposure time E .

We expect that the wider ILi bandpass (1050 to 1600 Å) at shorter mean wavelength will increase the extinction, as shown in Fig. 27 of the S201 Catalog [7]. The correction to Eq. (1) was taken from the curves for 20,000 K and 40,000 K in that figure and is approximately

$$UF \text{ (on ILi)} = (V/E)10^{0.4(5.48RE)} = (V/E)10^{2.19RE} \quad (2)$$

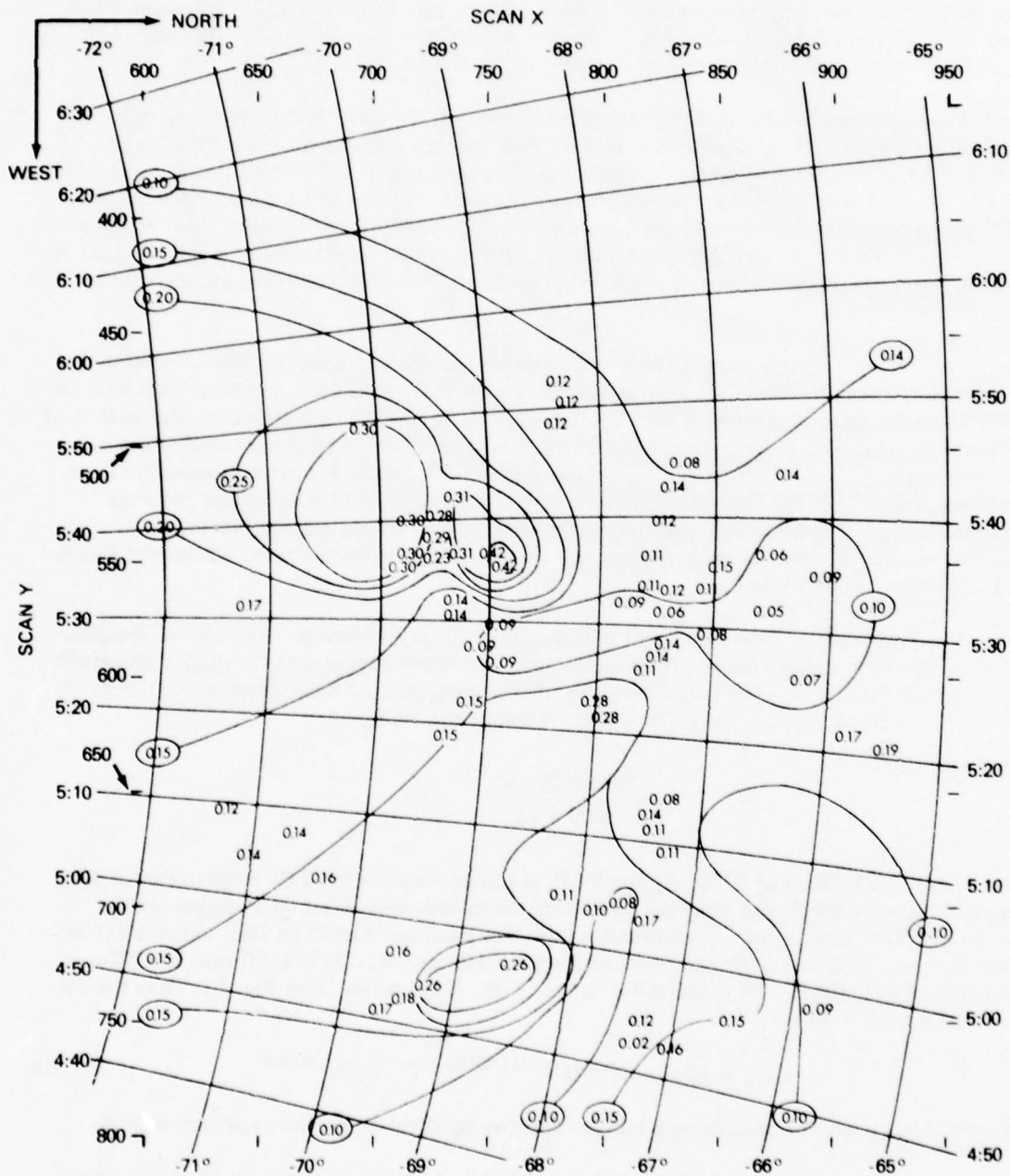


Fig. 14 — Contour plot of 100 E(B - V) in the LMC, based on values given by Lucke [20] and used for estimating unreddened far-UV fluxes

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Values of the unreddened far-UV flux, listed as UF in Appendix B, were calculated in this way; they are fairly consistent, thus justifying the rough approximations used.

DISCUSSION

Using Henize's estimates of $H\alpha$ surface brightnesses calibrated by Doherty et al. [18], we calculated the $H\alpha$ flux from each emission region (column labeled HA in Appendix B) and its ratio to the measured far-UV flux (UF). This ratio, called the "hydrogen index" (HI), is zero or very near zero for the 35 LH associations and 140 other hot-star areas far from $H\alpha$ emission regions. The small, faint Henize nebulas have HI values about 0.05 to 0.1, which indicates the upper limit of $H\alpha$ emission not detected by Henize.

Table 2 is a listing of the 157 Henize nebulas measured, showing the combined data from all four frames—the mean V/E for frames A124 and A125 listed under "Fil L," and the mean V/E for frames A129 and A130 listed under "Fil C." These values are used to calculate mean $HI = HA/UF$ for frames A124 and A125 listed under "Mean HI, Fil L" and frames A129 and A130 under "Mean HI, Fil C." Italicized values are the most reliable (deviations less than 10%). Figs. 15, 16, and 17 are plots of small, medium, and large values of V/E for the nebulas in frames A124 and A125 (Fil L or ILi) vs V/E for these nebulas in frames A129 and A130 (Fil C or ICa) from $V/E = 0$ to $V/E = 3800$, for both Henize nebulas and LH associations. Although there are some deviants (notably LH35 and N51 at the upper right in Fig. 15, N144 in Fig. 16, and N119 in Fig. 17), these figures show that $V/E(ILi) = 1.77 V/E(ICa) + 3$ within $\pm 10\%$ over this large range, thus confirming the background estimates fairly well.

Because V/E is 1.77 times larger on ILi frames, UF is about twice as large on ILi frames as on ICa frames. Thus $HI(ILi) \approx 0.5 HI(ICa)$, as listed in Table 2 under "Ratio C/L." We averaged $HI(ILi)$ and $0.5HI(ICa)$ to get a mean value of HI, contoured in Fig. 18. This shows the distribution of atomic hydrogen across the LMC as determined from S201 far-UV measurements and Henize's $H\alpha$ measurements [17,18]. There seem to be seven or eight clots of hydrogen around

$x = 640, y = 600$, near N199 and N200, where $\overline{HI} = 0.91$ at $\alpha = 5:23.5, \delta = -71^\circ 20'$,
 $x = 720, y = 640$, near N114, where $\overline{HI} = 1.78$ at $\alpha = 5:15.0, \delta = -69^\circ 35'$,
 $x = 720, y = 760$, near N77, where $\overline{HI} = 1.49$ at $\alpha = 4:49.0, \delta = -69^\circ 14'$,
 $x = 790, y = 750$, near N8, where $\overline{HI} = 1.35$ at $\alpha = 4:54.1, \delta = -67^\circ 51'$,
 $x = 820, y = 550$, near N56 and N59, where $\overline{HI} = 2.26$ at $\alpha = 5:35.7, \delta = -67^\circ 37'$,
 $x = 820, y = 590$, near N51, where $\overline{HI} = 1.59$ at $\alpha = 5:27.4, \delta = -67^\circ 34'$,
 $x = 870, y = 735$, near N14, where $\overline{HI} = 0.95$ at $\alpha = 5:00.2, \delta = -66^\circ 18'$,
 $x = 885, y = 545$, near N64, where $\overline{HI} = 1.19$ at $\alpha = 5:37.2, \delta = -66^\circ 18'$.

Measurements of some of these areas have been made longward of 1500 \AA with the ultraviolet spectrometer on board the ANS spacecraft [10].

Bright $H\alpha$ regions require both hot stars (implying high UF) and plentiful interstellar material; however, interstellar material can reduce observed far-UV brightness (V/E) due to dust extinction and may be responsible for some of the scatter in the correlation. The famous 30 Doradus region, for example, is *not* the brightest far-UV source in the LMC; this distinction is taken by the region of LH41, or N119A, which includes the highly luminous A-type supergiant S Doradus.

Table 2 — Values of the Hydrogen Index for 157 Nebulas Through Filters LiF (Fil L) and CaF₂ (Fil C)
(In the first column, the entry 77A-E, ..., N77E, and the entry 79, A-E means N79, N79A, ..., N79E.)

| Henize N No. | Assoc. LH No. | R.A. | Dec. | Size | HA | V/E Fil L | Mean HI Fil L | V/E Fil C | Mean HI Fil C | Ratio C/L |
|-----------------|------------------|--------|--------|-------------|-------|--------------|------------------|--------------|------------------|--------------|
| 2 | | 4:43.1 | -68:01 | 2.4 × 2.4 | 3.4 | -0.7 | — | 0.2 | 11.6? | — |
| 76 | | 4:49.2 | -68:29 | 3.6 × 4.8 | 4.5 | 3.5 | 0.69 | 0.3 | 9.2? | 13.? |
| 77A-E | | 4:49.7 | -69:17 | 8.3 × 7.1 | 107.7 | 27 | 1.75 | 24 | 2.45 | 1.4 |
| 3 | | 4:50.0 | -67:46 | 11.9 × 9.5 | 52.5 | 75 | 0.41 | 57 | 0.62 | 1.5 |
| 79, A-E | 1 | 4:51.1 | -69:30 | 15.5 × 20.2 | 395.7 | 1127 | 0.15 | 647 | 0.32 | 2.1 |
| 79CE | 2 | 4:52.5 | -69:25 | 6.0 × 6.0 | 58.0 | 45 | 0.51 | 31 | 0.92 | 1.8 |
| 5 | 3 | 4:52.6 | -67:22 | 6.0 × 6.0 | 35.2 | 18 | 1.02 | 9 | 2.57 | 2.5 |
| 8A | | 4:53.1 | -68:08 | 4.8 × 3.6 | 23.1 | 11 | 1.32 | 6 | 2.75 | 2.1 |
| 81AB | | 4:53.1 | -69:18 | 3.6 × 3.6 | 11.6 | 2.5 | 1.35? | 1.1 | 4.00 | 3.0? |
| 4A-F | 4 | 4:53.2 | -66:59 | 6.0 × 7.1 | 31.0 | 50 | 0.28 | 41 | 0.41 | 1.5 |
| 7 | | 4:53.5 | -67:28 | 3.6 × 3.6 | 3.2 | 5 | 0.36 | 0.0 | — | — |
| 185 | | 4:54.2 | -70:05 | 9.5 × 9.5 | 60.6 | 72 | 0.38 | 39 | 0.84 | 2.2 |
| 80 | | 4:54.3 | -68:27 | 3.6 × 3.6 | 9.2 | 7 | 0.48 | 3 | 1.45 | 3.0 |
| 83, A-D | 5 | 4:54.5 | -69:16 | 7.1 × 8.3 | 150.8 | 117 | 0.36 | 92 | 0.60 | 1.7 |
| 87 | | 4:54.7 | -69:35 | 2.4 × 2.4 | 0.6 | 0.2 | 1.59? | 1.2 | 0.28? | 0.2? |
| 88 | 8 | 4:55.1 | -69:29 | 2.4 × 3.6 | 0.7 | 6.5 | 0.05 | 1.1 | 0.33 | 6.6 |
| 9 | 6 | 4:55.2 | -67:13 | 10.7 × 9.5 | 81.2 | 192 | 0.23 | 135 | 0.38 | 1.7 |
| 84 | | 4:55.7 | -68:31 | 4.8 × 4.8 | 10.8 | 12 | 0.24 | 1.2 | 3.16 | 13. |
| 90 | 8 | 4:55.7 | -69:21 | 2.4 × 2.4 | 1.5 | 3.1 | 0.19 | -0.9 | — | — |
| 85, 86 | | 4:55.9 | -68:43 | 6.0 × 6.0 | 19.6 | 23 | 0.24 | 3.5 | 2.06 | 8.6 |
| 11, A-L | 9-14 | 4:56.6 | -66:30 | 26.2 × 23.8 | 1874. | 3577 | 0.25 | 2277 | 0.46 | 1.8 |
| 94A-C | 8 | 4:57.0 | -69:33 | 6.0 × 6.0 | 20.9 | 38 | 0.25 | 7.1 | 1.59 | 6.4 |
| 11BC | 9, 13 | 4:57.2 | -66:30 | 7.1 × 8.3 | 355. | 181 | 0.92 | 90 | 2.22 | 2.4 |
| 93 | | 4:57.2 | -69:18 | 2.4 × 3.6 | 0.5 | 2.6 | 0.07? | 0.7 | 0.35 | 5.0? |
| 92, AB | 11 | 4:57.3 | -68:50 | 4.8 × 4.8 | 14.4 | 13 | 0.31 | 7.2 | 0.74 | 2.4 |
| 91, AB | 12 | 4:57.5 | -68:29 | 8.3 × 9.5 | 229.5 | 275 | 0.23 | 178 | 0.48 | 2.1 |
| 12, A | | 4:58.6 | -66:16 | 7.2 × 6.0 | 26.8 | 17.5 | 0.79 | 9.9 | 1.58 | 2.0 |
| 16A | | 5:00.0 | -68:03 | 4.8 × 6.0 | 4.8 | 9 | 0.26 | 3.3 | 0.86 | 3.3 |

Table continues.

Table 2 (Continued) — Values of the Hydrogen Index for 157 Nebulas Through Filters LiF (Fil L) and CaF₂ (Fil C)
(In the first column, the entry 77A-E, ..., N77E, and the entry 79, A-E means N79, N79A, ..., N79E.)

| Henize N No. | Assoc. LH No. | R.A. | Dec. | Size | HA | V/E Fil L | Mean HI Fil L | V/E Fil C | Mean HI Fil C | Ratio C/L |
|-----------------|------------------|--------|--------|-------------|-------|--------------|------------------|--------------|------------------|--------------|
| 13 | | 5:00.1 | -66:09 | 4'8 × 4'8 | 4.0 | -1.5 | — | 0.8 | 3.31 | — |
| 186A-E | | 5:00.1 | -70:15 | 10.7 × 11.9 | 57.5 | 177 | 0.14 | 93 | 0.33 | 2.4 |
| 14 | | 5:00.2 | -66:19 | 4.8 × 4.8 | 11.5 | 5.6 | 0.94 | 3.3 | 1.92 | 2.0 |
| 15 | | 5:00.7 | -66:27 | 2.4 × 2.4 | 4.0 | 2.4 | 0.85 | 0.4 | 6.7? | 8.? |
| 10, 13 | | 5:02.1 | -68:08 | 25.0 × 27.4 | 802. | 871 | 0.50 | 442 | 1.14 | 2.3 |
| 17, AB | 19 | 5:03.8 | -67:23 | 3.6 × 4.8 | 8.9 | 2.2 | 1.93 | 6.4 | 0.72 | 0.4 |
| 188 | | 5:04.1 | -70:18 | 2.4 × 2.4 | 0.1 | 0.0 | — | 0.8 | 0.04 | — |
| 21 | 22 | 5:04.9 | -67:38 | 4.8 × 6.0 | 11.8 | 14 | 0.56 | 6.5 | 1.34 | 2.4 |
| 190 | 24 | 5:04.9 | -70:48 | 4.8 × 4.8 | 21.3 | 42 | 0.24 | 25 | 0.50 | 2.1 |
| 22 | 21 | 5:05.1 | -67:52 | 2.4 × 2.4 | 0.1 | 5 | 0.02 | 1.4 | 0.06 | 3.0 |
| 23A | 25 | 5:05.1 | -68:08 | 4.8 × 3.6 | 14.9 | 27 | 0.32 | 23 | 0.43 | 1.3 |
| 20 | | 5:05.2 | -66:59 | 3.6 × 4.8 | 4.0 | 6.3 | 0.31 | 1.0 | 2.2? | 7.1? |
| 191AB | 23 | 5:05.2 | -70:58 | 3.6 × 3.6 | 8.4 | 10.7 | 0.39 | 6.4 | 0.77 | 2.0 |
| 189 | | 5:05.3 | -70:12 | 3.6 × 3.6 | 2.9 | 6.7 | 0.19 | 3.2 | 0.48 | 2.5 |
| 23, A | 25 | 5:05.8 | -68:12 | 11.9 × 16.7 | 205.1 | 740 | 0.16 | 381 | 0.35 | 2.2 |
| 100 | | 5:07.5 | -68:37 | 4.8 × 6.0 | 5.5 | 18 | 0.15 | 2.3 | 1.38 | 9.2 |
| 101 | 27 | 5:07.8 | -69:13 | 2.4 × 2.4 | 0.05 | 2 | 0.005 | 0.5 | 0.03 | 6. |
| 103AB | | 5:09.2 | -68:50 | 8.3 × 6.0 | 104.3 | 144 | 0.32 | 103 | 0.55 | 1.7 |
| 104AB | | 5:09.7 | -68:33 | 4.8 × 6.0 | 11.4 | 17.4 | 0.31 | 8.0 | 0.80 | 2.6 |
| 105, A | 31 | 5:10.1 | -68:58 | 8.3 × 8.3 | 122.7 | 239 | 0.23 | 146 | 0.45 | 2.0 |
| 26, 27 | 32 | 5:10.8 | -67:10 | 6.0 × 6.0 | 5.0 | 39 | 0.07 | 18.2 | 0.18 | 2.6 |
| 108 | | 5:10.8 | -69:31 | 3.6 × 3.6 | 1.6 | 1.2 | 0.61? | 0.1 | 8.7? | 14.? |
| 193A-E | | 5:13.0 | -70:28 | 3.6 × 3.6 | 4.8 | 5.5 | 0.42 | 1.7 | 1.6? | 3.8? |
| 112 | | 5:13.7 | -69:15 | 3.6 × 3.6 | 3.3 | -2.5 | — | -4 | — | — |
| 30, A-D | 34-38 | 5:13.8 | -67:28 | 11.9 × 9.5 | 90.7 | 148 | 0.34 | 79 | 0.75 | 2.2 |
| 113, A-F | 35 | 5:13.8 | -69:24 | 11.9 × 8.3 | 307.5 | 410 | 0.33 | 258 | 0.64 | 1.9 |
| 31 | | 5:14.8 | -66:29 | 3.6 × 3.6 | 1.0 | 4.6 | 0.14 | 2.2 | 0.33 | 2.4 |
| 114, A | 39 | 5:14.9 | -69:34 | 10.7 × 8.3 | 159.1 | 38 | 1.99 | 26 | 3.15 | 1.6 |

Table continues.

Table 2 (Continued) — Values of the Hydrogen Index for 157 Nebulas Through Filters LiF (Fil L) and CaF₂ (Fil C)
(In the first column, the entry 77A-E, ..., N77E, and the entry 79, A-E means N79, N79A, ..., N79E.)

| Henize N No. | Assoc. LH No. | R.A. | Dec. | Size | HA | V/E Fil L | Mean HI Fil L | V/E Fil C | Mean HI Fil C | Ratio C/L |
|-----------------|------------------|--------|--------|-------------|-------|--------------|------------------|--------------|------------------|--------------|
| 32 | | 5:15.9 | -68:02 | 2.4 × 2.4 | 0.3 | 0.0 | — | 0.3 | 0.52 | — |
| 194 | | 5:16.5 | -71:50 | 2.4 × 2.4 | 0.4 | 0.2 | 1.12? | 0.2 | 1.39 | 1.2? |
| 33 | | 5:16.9 | -67:23 | 3.6 × 3.6 | 10.5 | 4.3 | 1.25 | 0.1 | — | — |
| 116 | | 5:17.3 | -69:57 | 3.6 × 3.6 | 1.9 | 3.0 | 0.31 | 0.1 | 8.3? | 27.? |
| 117 | | 5:17.4 | -69:38 | 2.4 × 2.4 | 1.5 | 3 | 0.22 | 5.2 | 0.17 | 0.8 |
| 35 | | 5:17.8 | -66:04 | 4.8 × 4.8 | 2.9 | 9.7 | 0.18 | 3.6 | 0.53 | 3.0 |
| 36 | | 5:18.0 | -67:57 | 3.6 × 3.6 | 1.0 | 1.7 | 0.22 | -0.1 | — | — |
| 195, AB | 40 | 5:18.4 | -71:18 | 6.0 × 4.8 | 15.7 | 15 | 0.48 | 6.0 | 1.45 | 3.0 |
| 119, A | 41 | 5:18.7 | -69:15 | 17.9 × 15.5 | 1028. | 3820 | 0.13 | 1496 | 0.39 | 3.0 |
| 118 | | 5:19.3 | -68:24 | 2.4 × 2.4 | 1.5 | -0.7 | — | 0.3 | 1.88 | — |
| 120, A-D | 42 | 5:19.3 | -69:43 | 8.3 × 10.7 | 293. | 240 | 0.66 | 239 | 0.77 | 1.2 |
| 122 | 46 | 5:20.3 | -69:34 | 2.4 × 2.4 | 0.1 | 1.5 | 0.02? | 2.3 | 0.01 | 0.5? |
| 37 | | 5:20.3 | -66:56 | 4.8 × 6.0 | 12.2 | 8.2 | 0.80 | 2.0 | 3.84 | 4.8 |
| 38 | | 5:20.6 | -66:50 | 3.6 × 3.6 | 7.6 | 2.5 | 1.6? | 0.8 | 6.9? | 4.3? |
| 41 | | 5:20.7 | -68:04 | 3.6 × 3.6 | 1.0 | 2 | 0.14 | -0.1 | — | — |
| 40 | 43 | 5:21.5 | -65:30 | 3.6 × 3.6 | 5.5 | 3.3 | 0.67 | 1.2 | 2.4? | 3.6? |
| 197 | | 5:21.6 | -71:45 | 2.4 × 2.4 | 0.6 | 2.7 | 0.10 | 0.2 | 1.5? | 15.? |
| 44BCF | 47 | 5:21.8 | -67:58 | 7.1 × 8.3 | 84.2 | 328 | 0.06 | 139 | 0.21 | 3.5 |
| 126 | 44 | 5:21.9 | -69:05 | 2.4 × 3.6 | 0.3 | 2.6 | 0.05 | 2.2 | 0.07 | 1.4 |
| 127AB, 129 | | 5:22.0 | -69:43 | 3.6 × 3.6 | 18.7 | 1.0 | 9.8? | -0.2 | — | — |
| 43 | 45 | 5:22.2 | -65:46 | 7.1 × 13.1 | 64.4 | 80 | 0.34 | 58 | 0.58 | 1.7 |
| 128 | | 5:22.5 | -68:41 | 3.6 × 3.6 | 0.7 | 1.8 | 0.18? | 0.1 | 3.9? | 22.? |
| 44, A-N | 47-49 | 5:22.6 | -67:59 | 21.4 × 17.9 | 2040. | 1842 | 0.28 | 960 | 0.72 | 2.6 |
| 45, A | | 5:22.8 | -66:44 | 3.6 × 3.6 | 5.0 | 1.6 | 1.7? | 0.2 | 14.? | 8.2? |
| 130 | | 5:23.0 | -70:13 | 3.6 × 3.6 | 3.6 | -2 | — | -0.1 | — | — |
| 46 | | 5:23.1 | -66:25 | 3.6 × 3.6 | 5.0 | 1 | 3.0? | 0.7 | 5.0? | 1.7? |
| 198 | | 5:23.2 | -71:38 | 8.3 × 8.3 | 58.3 | 43 | 0.60 | 23 | 1.36 | 2.3 |
| 131 | | 5:23.3 | -69:54 | 2.4 × 3.6 | 2.0 | 6 | 0.18 | 1.3 | 0.9? | 5.0? |

Table continues.

Table 2 (Continued) — Values of the Hydrogen Index for 157 Nebulas Through Filters LiF (Fil L) and CaF₂ (Fil C)
(In the first column, the entry 77A-E, ..., N77E, and the entry 79, A-E means N79, N79A, ..., N79E.)

| Henize N No. | Assoc. LH No. | R.A. | Dec. | Size | HA | V/E Fil L | Mean HI Fil L | V/E Fil C | Mean HI Fil C | Ratio C/L |
|-----------------|------------------|--------|--------|-------------|--------|--------------|------------------|--------------|------------------|--------------|
| 199, 200 | 50 | 5:24.0 | -71:23 | 15.5 × 9.5 | 121.0 | 75 | 0.69 | 28 | 2.26 | 3.3 |
| 132A-J | | 5:24.1 | -69:40 | 6.0 × 8.3 | 11.4 | 50 | 0.12 | 44 | 0.14 | 1.2 |
| 137AB | | 5:24.4 | -68:58 | 2.4 × 3.6 | 0.5 | 3 | 0.10 | 0.0 | — | — |
| 138, A-D | | 5:24.8 | -68:33 | 8.3 × 9.5 | 64.4 | 85 | 0.39 | 54 | 0.72 | 1.8 |
| 48, A-E | 53 | 5:25.4 | -66:23 | 17.9 × 14.3 | 270.3 | 266 | 0.71 | 107 | 1.94 | 2.7 |
| 48A-C | 52 | 5:25.7 | -66:19 | 7.1 × 3.6 | 20.3 | 17 | 0.83 | 12 | 1.29 | 1.6 |
| 201, 202 | | 5:25.7 | -71:32 | 3.6 × 3.6 | 0.6 | 3.2 | 0.08 | 0.3 | 1.1? | 14.? |
| 140, 143 | | 5:25.9 | -69:15 | 9.5 × 9.5 | 47.7 | 168 | 0.16 | 80 | 0.39 | 2.4 |
| 142 | | 5:25.9 | -69:28 | 6.0 × 4.8 | 10.4 | 22 | 0.25 | 6 | 1.11 | 4.4 |
| 49 | 53 | 5:26.0 | -66:08 | 3.6 × 3.6 | 13.2 | 3 | 3.4? | 0.8 | 13.? | 4.? |
| 50 | | 5:26.0 | -67:12 | 6.0 × 4.8 | 11.4 | 21.5 | 0.25 | 5.3 | 1.27 | 5.1 |
| 134 | 59 | 5:26.2 | -69:55 | 2.4 × 2.4 | 0.2 | 0.3 | 0.17 | 0.3 | 0.26 | 1.5 |
| 51BE | 55 | 5:26.7 | -67:41 | 10.7 × 11.9 | 315.9 | 97 | 1.85 | 72 | 2.67 | 1.4 |
| 143 | 57 | 5:26.8 | -69:21 | 4.8 × 4.8 | 18.6 | 38 | 0.26 | 24 | 0.50 | 1.9 |
| 144, AB | 58 | 5:26.9 | -68:52 | 10.7 × 10.7 | 475.4 | 1010 | 0.30 | 415 | 0.81 | 2.7 |
| 51, A-E | 51-63 | 5:26.9 | -67:35 | 22.6 × 21.4 | 1707.0 | 3258 | 0.30 | 1619 | 0.69 | 2.3 |
| 205B | 56 | 5:26.9 | -71:38 | 6.0 × 6.0 | 9.0 | 40 | 0.10 | 10.5 | 0.45 | 4.5 |
| 51AC | 60, 63 | 5:27.8 | -67:30 | 7.1 × 6.0 | 69.7 | 115 | 0.30 | 38 | 1.07 | 3.6 |
| 145 | | 5:27.9 | -69:11 | 2.4 × 2.4 | 0.1 | -9 | — | 1.9 | 0.02 | — |
| 204 | 62 | 5:28.0 | -70:36 | 6.0 × 6.0 | 64.0 | 57 | 0.48 | 26.5 | 1.25 | 2.6 |
| 205A | | 5:28.3 | -71:26 | 6.0 × 3.6 | 7.0 | 16 | 0.18 | 5.3 | 0.54 | 3.0 |
| 146 | 61 | 5:29.1 | -69:03 | 3.6 × 3.6 | 1.6 | 8 | 0.11 | 2.9 | 0.34 | 3.1 |
| 206, A-D | 66, 69 | 5:31.3 | -71:07 | 17.8 × 20.2 | 1395.3 | 1139 | 0.52 | 460 | 1.58 | 3.0 |
| 148B-E | 71 | 5:32.0 | -68:34 | 6.0 × 4.8 | 21.4 | 16 | 0.49 | 14.2 | 0.69 | 1.4 |
| 148I | 73 | 5:32.1 | -68:42 | 6.0 × 6.0 | 19.2 | -26 | — | -15 | — | — |
| 57AE | 76 | 5:32.1 | -67:44 | 8.3 × 8.3 | 336.3 | 306 | 0.69 | 199 | 1.31 | 1.9 |
| 55, A | 72 | 5:32.3 | -66:28 | 9.5 × 7.1 | 173.3 | 163 | 0.81 | 116 | 1.24 | 1.5 |
| 57, A-E | 76 | 5:32.5 | -67:43 | 13.1 × 13.1 | 711.6 | 918 | 0.49 | 385 | 1.31 | 2.7 |

Table continues.

Table 2 (Continued) — Values of the Hydrogen Index for 157 Nebulas Through Filters LiF (Fil L) and CaF₂ (Fil C)
(In the first column, the entry 77A-E, ..., N77E, and the entry 79, A-E means N79, N79A, ..., N79E.)

| Henize N No. | Assoc. LH No. | R. A. | Dec. | Size | HA | V/E Fil L | Mean HI Fil L | V/E Fil C | Mean HI Fil C | Ratio C/L |
|-----------------|------------------|--------|--------|-------------|--------|--------------|------------------|--------------|------------------|--------------|
| 58 | | 5:32.8 | -70:28 | 2.4 × 2.4 | 1.8 | 14 | 0.07 | 10.3 | 0.11 | 1.6 |
| 148A | | 5:33.0 | -68:25 | 2.4 × 2.4 | 1.1 | 1.5 | 0.26? | 0.6 | 0.93 | 3.6? |
| 149AB | | 5:33.3 | -69:48 | 2.4 × 2.4 | 1.9 | 1.6 | 0.42 | 0.1 | 7.3? | 17.? |
| 150 | | 5:34.0 | -68:47 | 2.4 × 3.6 | 2.7 | 2.3 | 0.27 | 0.8 | 1.0 | 3.7 |
| 62AB | | 5:34.5 | -66:16 | 6.0 × 4.8 | 41.9 | 25 | 1.13 | 13 | 2.46 | 2.2 |
| 154, AB | 81, 87 | 5:35.5 | -69:44 | 16.7 × 20.2 | 1288.4 | 1920 | 0.16 | 952 | 0.43 | 2.7 |
| 56, 59A-C | 82, 88 | 5:35.6 | -67:35 | 9.5 × 11.9 | 543.2 | 138 | 2.21 | 76 | 4.63 | 2.1 |
| 63, A | 83 | 5:35.6 | -66:01 | 8.3 × 7.1 | 101.8 | 104 | 0.62 | 58 | 1.23 | 2.0 |
| 64A-C | 95 | 5:37.1 | -66:21 | 7.1 × 8.3 | 91.3 | 65 | 1.04 | 27 | 2.69 | 2.6 |
| 68 | | 5:37.2 | -68:15 | 2.4 × 2.4 | 0.6 | 2.8 | 0.11 | 0.4 | 0.9? | 8.? |
| 65(75%) | | 5:37.3 | -66:38 | 7.1 × 15.5 | 43.2 | 47 | 0.55 | 18 | 1.66 | 3.0 |
| 155 | | 5:37.7 | -69:47 | 3.6 × 3.6 | 2.2 | 3 | 0.17 | 0.4 | 1.6? | 9.? |
| 156 | | 5:38.1 | -69:36 | 3.6 × 2.4 | 1.4 | -1.7 | — | -0.1 | — | — |
| 157AB | 99, 100 | 5:38.8 | -69:08 | 20.2 × 17.8 | 3719. | 1431 | 0.47 | 507 | 1.97 | 4.2 |
| 213, A | | 5:38.9 | -70:42 | 4.8 × 6.0 | 48.7 | 18 | 0.61 | 5.6 | 2.71 | 4.4 |
| 148C | 101 | 5:39.5 | -69:32 | 6.0 × 6.0 | 257.5 | 73 | 0.85 | 58 | 1.44 | 1.7 |
| 158, A-D | 96, 101 | 5:39.9 | -69:28 | 15.5 × 14.3 | 864. | 619 | 0.33 | 215 | 1.33 | 4.0 |
| 159, A-L | 105 | 5:40.4 | -69:46 | 7.1 × 7.1 | 102.6 | 21 | 1.08 | -9 | — | — |
| 161 | | 5:40.5 | -69:00 | 3.6 × 3.6 | 5.7 | 1.8 | 0.68 | 0.5 | 3.6? | 5.? |
| 158A | 104 | 5:40.6 | -69:24 | 3.6 × 3.6 | 68.9 | 24 | 0.72 | 14 | 1.64 | 2.3 |
| 172, 173 | | 5:40.7 | -69:55 | 4.8 × 4.8 | 3.3 | 7 | 0.10 | 0.8 | 1.34? | 13.? |
| 160, A-F | 103 | 5:40.8 | -69:38 | 15.5 × 14.3 | 771.9 | 535 | 0.33 | 307 | 0.79 | 2.4 |
| 176 | | 5:41.3 | -70:11 | 3.6 × 3.6 | 2.1 | 7 | 0.06 | 0.3 | 2.1? | 35.? |
| 218 | | 5:41.5 | -70:35 | 2.4 × 2.4 | 1.9 | 2.3 | 0.19 | 0.1 | 12.? | 64.? |
| 214, A-H | 107 | 5:41.6 | -71:16 | 16.7 × 11.9 | 179.1 | 160 | 0.32 | 54 | 1.27 | 4.0 |
| 216 | | 5:41.6 | -70:55 | 3.6 × 3.6 | 0.6 | 2.3 | 0.26 | 0.2 | 1.4? | 5.4? |
| 117 | | 5:41.6 | -69:55 | 4.8 × 3.6 | 23.4 | -1.5 | — | 0.5 | 14.? | — |
| 219 | | 5:41.7 | -70:24 | 3.6 × 3.6 | 2.9 | 8.5 | 0.07 | 0.4 | 2.23 | 32. |
| 174, 175 | | 5:42.1 | -70:01 | 4.8 × 4.8 | 11.7 | 8 | 0.30 | 5.1 | 0.69 | 2.3 |

Table continues.

Table 2 (Concluded) — Values of the Hydrogen Index for 157 Nebulas Through Filters LiF (Fil L) and CaF₂ (Fil C)
(In the first column, the entry 77A-E, ..., N77E, and the entry 79, A-E means N79, N79A, ..., N79E.)

| Henize N No. | Assoc. LH No. | R.A. | Dec. | Size | HA | V/E Fil L | Mean HI Fil L | V/E Fil C | Mean HI Fil C | Ratio C/L |
|-----------------|------------------|--------|--------|-------------|-------|--------------|------------------|--------------|------------------|--------------|
| 214CFGH | 107, 110 | 5:42.3 | -71:20 | 6'0 × 6'0 | 93.9 | 38 | 0.71 | 18 | 1.95 | 2.7 |
| 164 | 113 | 5:42.9 | -69:05 | 7.1 × 7.1 | 123.0 | 35 | 1.00 | 15 | 3.24 | 3.2 |
| 165 | | 5:43.2 | -68:58 | 3.6 × 3.6 | 12.7 | 5 | 0.72 | 2.6 | 1.87 | 2.6 |
| 70 | 114 | 5:43.5 | -67:51 | 9.5 × 9.5 | 240. | 123 | 1.05 | 79. | 1.90 | 1.8 |
| 72 | 115 | 5:43.6 | -66:17 | 2.4 × 2.4 | 1.9 | 6 | 0.16 | 5.5 | 0.20 | 1.25 |
| 163 | | 5:43.6 | -69:46 | 6.0 × 6.0 | 63.0 | 17 | 0.82 | 3.2 | 5.90 | 7.2 |
| 71 | | 5:43.9 | -67:27 | 3.6 × 3.6 | 3.4 | 3.5 | 0.59 | 0.9 | 2.6? | 4.4? |
| 166, 167 | | 5:44.8 | -69:23 | 3.6 × 3.6 | 3.0 | 0.3 | 2.58 | 0.5 | 3.0? | 1.2? |
| 168, AB | | 5:45.8 | -69:46 | 6.0 × 4.8 | 22.8 | 12.5 | 0.40 | 5.4 | 1.27 | 3.18 |
| 74, AB | 116 | 5:45.8 | -67:09 | 7.1 × 15.5 | 93.3 | 185 | 0.34 | 118 | 0.58 | 1.7 |
| 169A-C | | 5:46.7 | -69:34 | 3.6 × 3.6 | 6.8 | 1 | 1.98 | 0.3 | 8.5? | 4.3? |
| 179A-D | | 5:48.4 | -69:53 | 3.6 × 3.6 | 4.6 | 4 | 0.26 | 1.4 | 1.02 | 3.9 |
| 180, A-C | 117, 118 | 5:49.5 | -70:05 | 16.7 × 13.1 | 337.8 | 540 | 0.25 | 246 | 0.43 | 1.7 |
| 181 | | 5:49.9 | -69:09 | 2.4 × 2.4 | 0.1 | 1 | 0.04 | 0.1 | 0.25 | 6.2 |
| 75AB | 122 | 5:56.2 | -68:12 | 7.1 × 8.3 | 38.3 | 68 | 0.33 | 31 | 0.83 | 2.5 |
| 221 | | 6:19.5 | -71:35 | 2.4 × 2.4 | 0.1 | 6 | 0.005 | -0.1 | — | — |

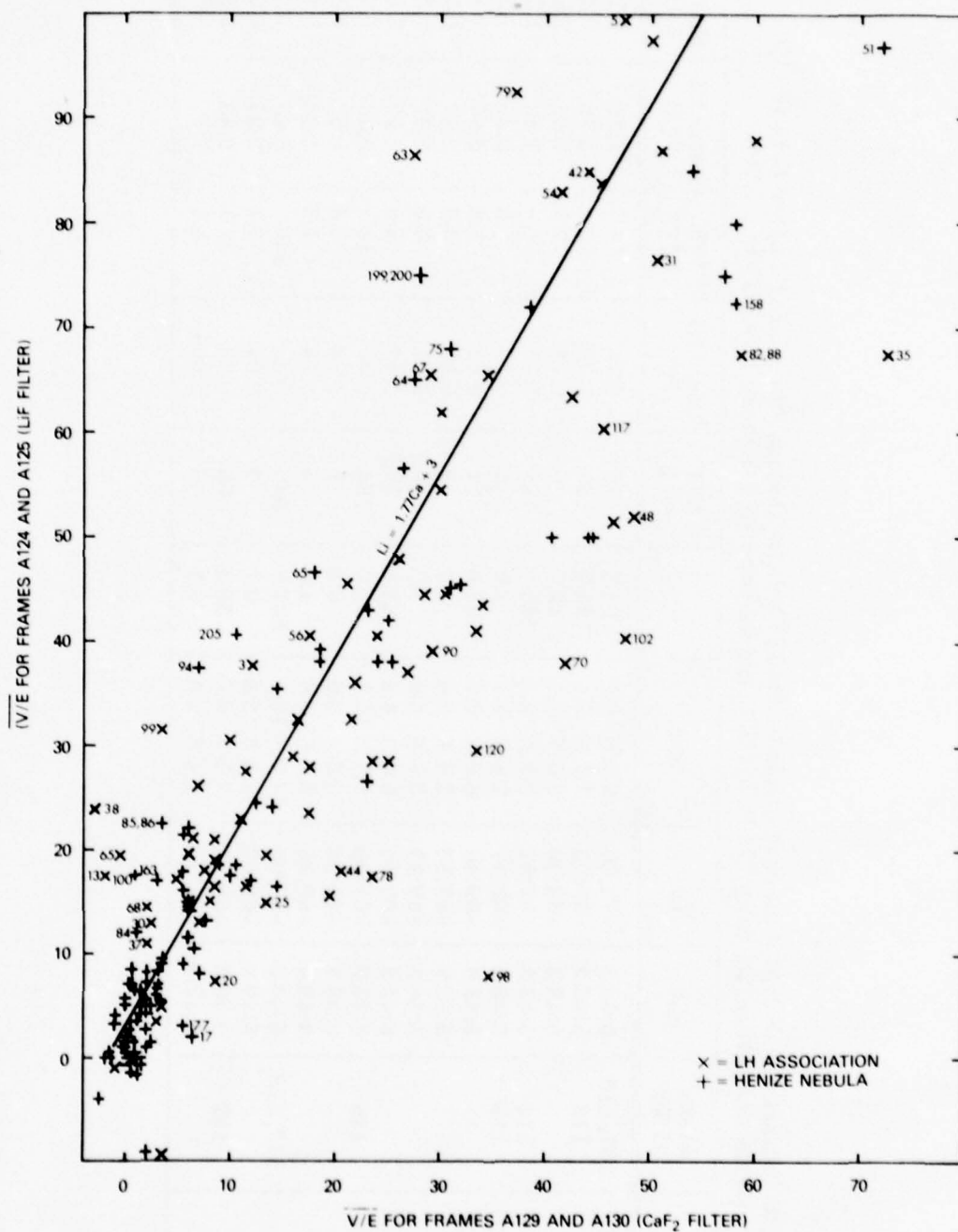


Fig. 15 — Small values of the ratio of density volume to exposure time V/E from ILi frames A124 and A125 vs V/E from ICa frames A129 and A130. The LH numbers and Henize N numbers of deviant points are indicated.

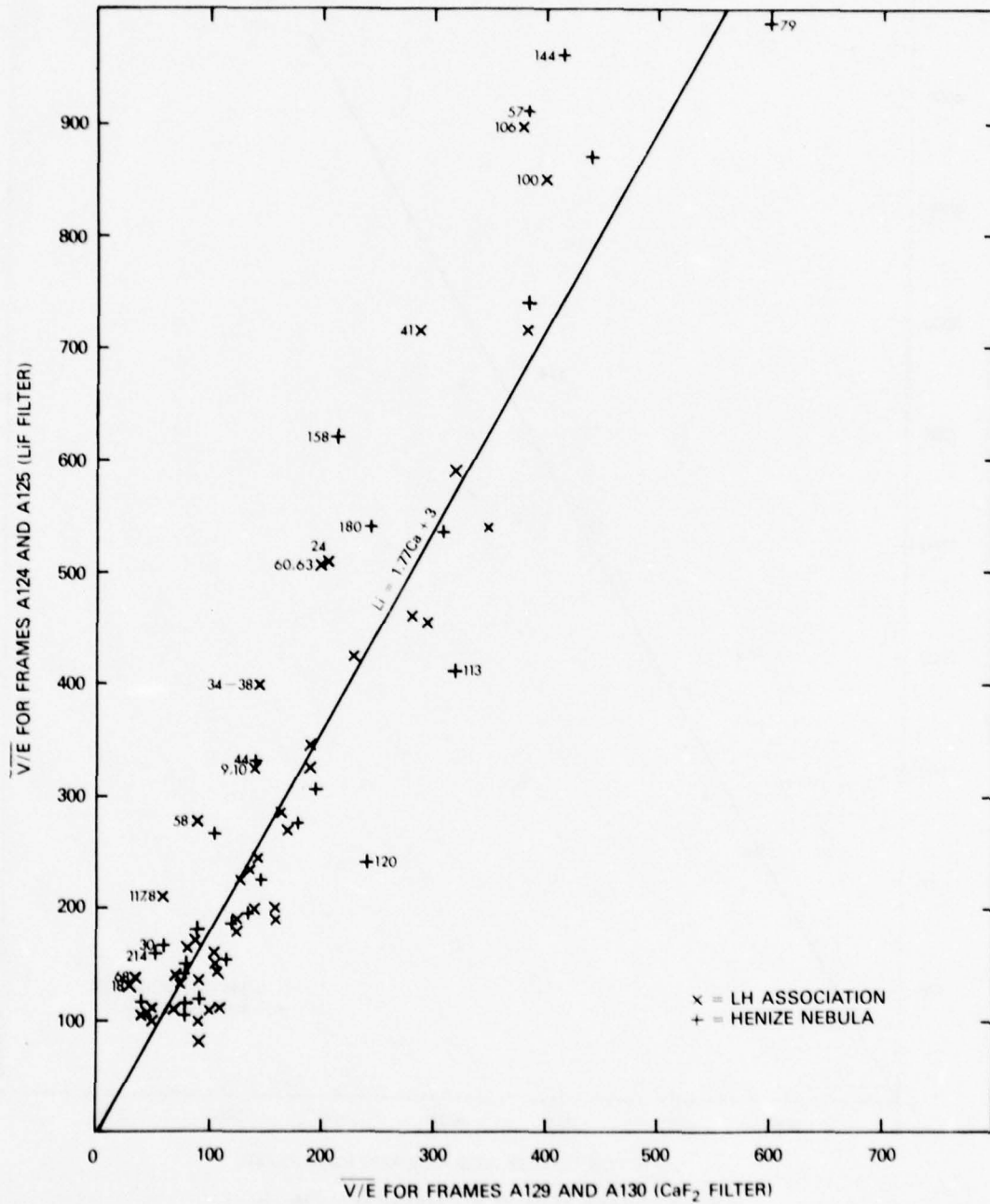


Fig. 16 — Intermediate values of V/E plotted as in Fig. 15

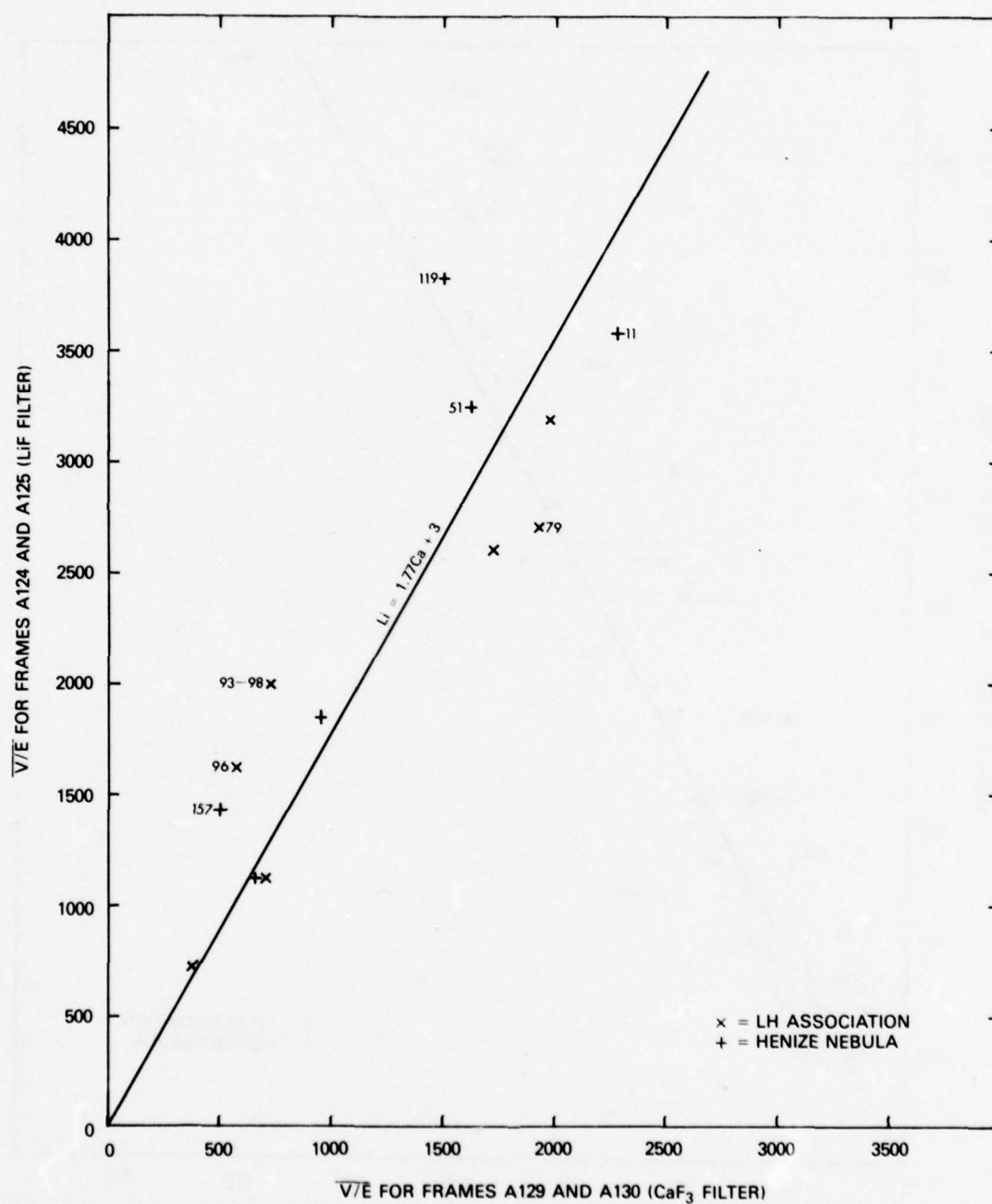


Fig. 17 — Large values of V/E plotted as in Fig. 15

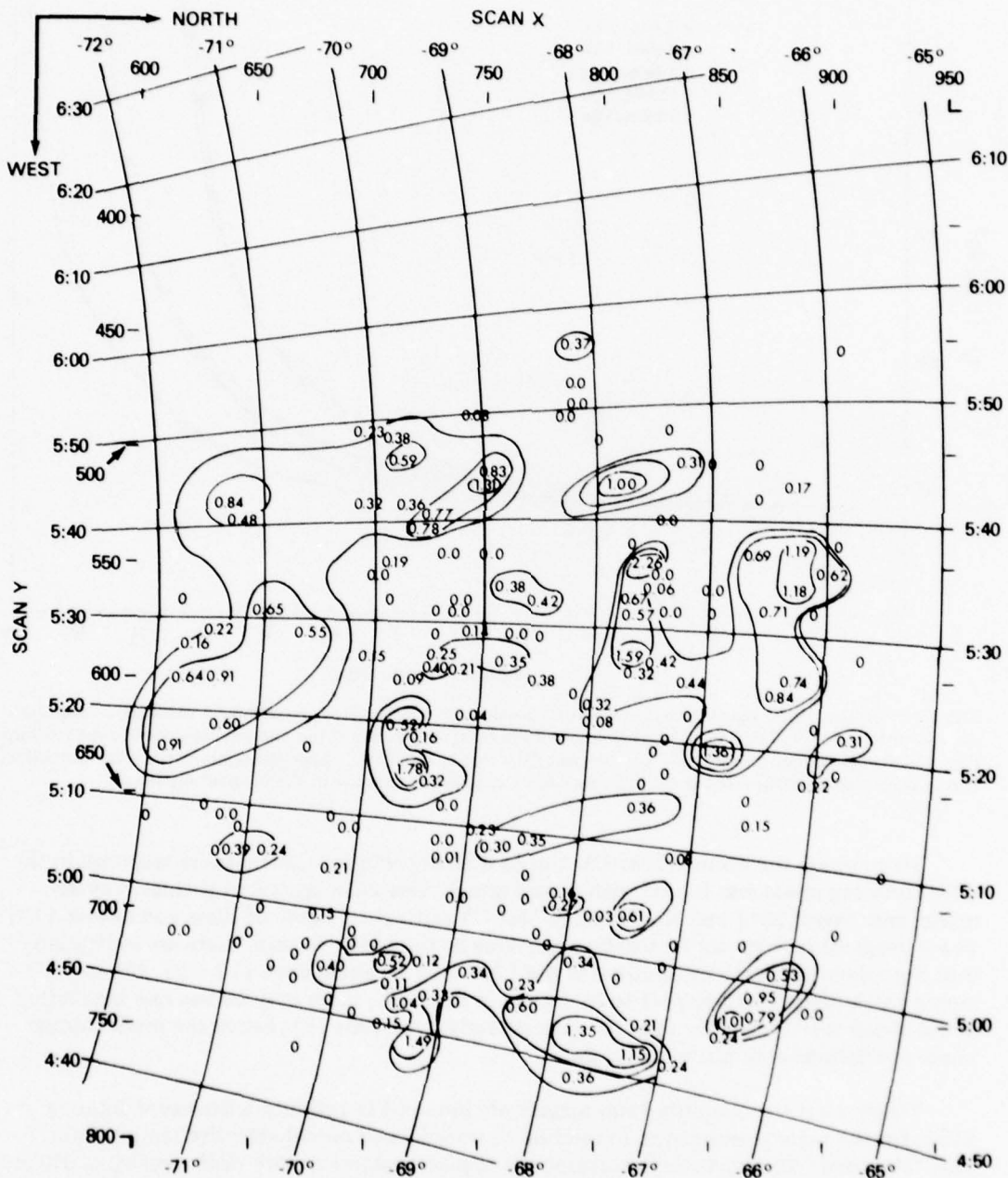


Fig. 18 — Contours of hydrogen index $HI = HA/UF$ in the LMC (HA = Henize $H\alpha$ flux, UF = measured far-UV flux corrected for extinction) plotted using the mean of frames A124, A125, 1/2 of A129, and 1/2 of A130

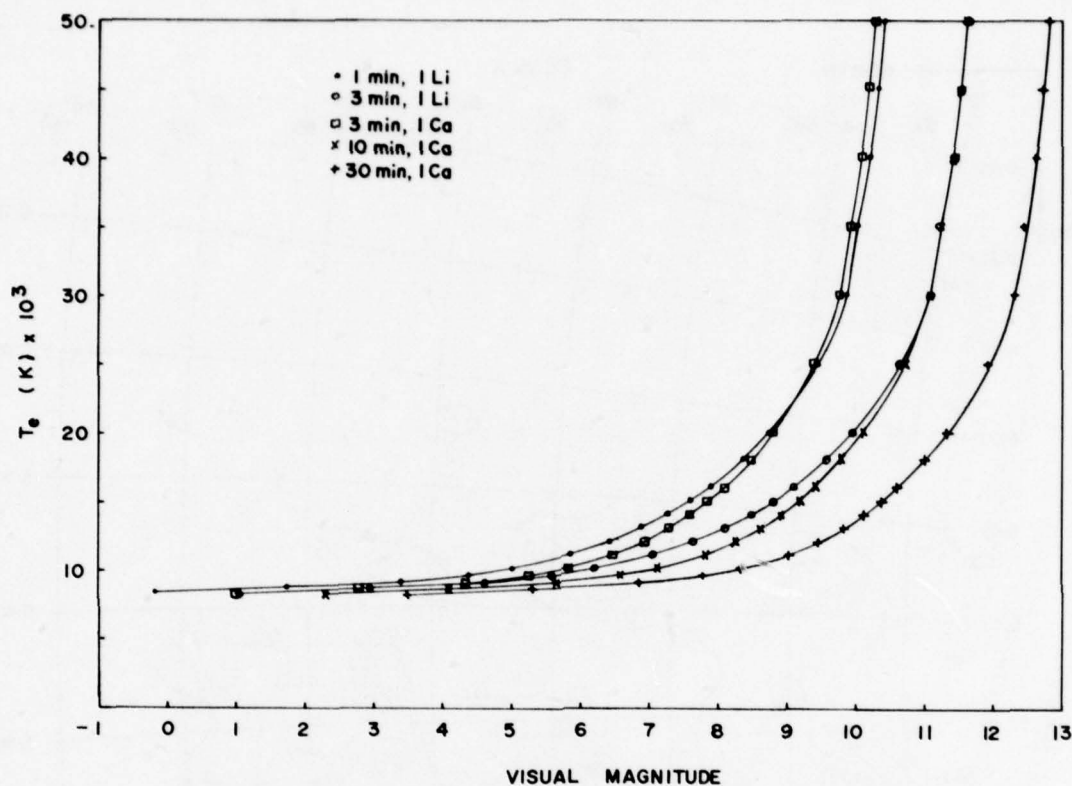


Fig. 19 — Stellar visual magnitude, in relation to effective temperature, required to produce a “standard” density volume of 5131 [7], computed for various S201 exposures using the preflight instrument calibration and stellar model atmosphere UV fluxes of Kurucz et al. [25] and assuming no interstellar extinction. Hot, unreddened stars as faint as $m_v = 13$ should be readily measurable in the longest exposures.

To compare the observed far-UV fluxes with expectations, the camera response in the direct imaging mode was folded with model atmosphere calculations of Kurucz, Peytremann, and Avrett [25] and the “average” far-UV extinction curve of Bless and Savage [13]. These predictions may not be totally applicable to the LMC, because there are indications that the interstellar extinction curve in the LMC may be anomalous [10–12]. If heavy elements are deficient with respect to hydrogen in the LMC, there may be less line blanketing in the stellar far-UV spectra than for galactic early-type stars [8]; hence the model atmosphere predictions may not be accurate.

Figure 19 is the computed star magnitude required to produce a density volume of 5131, for the various exposures, in relation to unreddened model effective temperature. This “standard” density volume corresponds to a conical image with peak density of 1.0 and 7 rasters full width and is by no means the weakest measurable image. (Density volumes less by at least a factor of 100 are accurately determinable.) Further details are given in the S201 catalog [7].

Unfortunately it is not practical to separate the effects of temperature and of interstellar extinction using the UV imagery data alone, because the effect of extinction is nearly equivalent to a decrease in effective temperature in the wavelength range covered by the ILi and ICa exposures. Only if the reddening and/or effective temperature is known from ground-based measurements can the UV fluxes be used to provide independent estimates of temperature and far-UV extinction. Although Lucke [20] has estimated the extinction for some of his associations and Bok and Bok [26] have measured integrated visual magnitudes and colors ($B - V$) for some associations, comparison of the present UV data and ground-based data is difficult because the available ground-based data are incomplete and because the S201 measurements integrate over areas which are larger than the individual associations and hence include a large contribution due to field stars.

SUMMARY

Far-UV electrographs of the LMC taken from the lunar surface on Apollo 16 have been scanned with a specially tuned PDS microdensitometer. The digitized scan data in units of 0.01D at scale of 1.19 arc-min per pixel (33- μ m raster) have been smoothed, contoured, and corrected for an empirically determined nonlinear response of the S201 electrographic camera, and isodensity contour maps of the LMC exposures were generated. On computer-printout mosaics of linearized density D_L , the 122 Lucke-Hodge (LH) associations and 157 of Henize's nebulas (N) in the LMC were located, the local background (BG) carefully estimated for each, and density volumes (V) summed within the specified areas. The far-UV brightnesses (V/E) were corrected for interstellar reddening (RE) in the LMC to give the unreddened far-UV flux (UF). All these data, as well as the H α flux (HA) for the nebulas, are listed for 1755 measurements in Appendix B.

Although an irregular background introduced large errors in some of the UF values, it was possible to derive meaningful values of the hydrogen index (HI) for 90 nebulas, from which a contour plot of $HI = HA/UF$ is reproduced in Fig. 18, showing seven or eight clots of interstellar hydrogen in the LMC. Some of the deviants in our plots of $V/E(ILi)$ vs $V/E(ICa)$ in Figs. 15, 16, and 17 may involve OB stars with abnormal emission lines. Most of the 210 objects plotted in Figs. 15, 16, and 17 fall within 10% of the relation $V/E(ILi) = 1.77V/E(ICa) + 3$ over the range 0 to 3800.

Figure 20 is a plot of the unidentified objects detected on at least two frames. They are listed in Table 3, which gives the mean value of V/E from all frames measured and possible identifications with NGC objects in some cases. Of the remaining 85 cases, some may be foreground OB stars not listed in the SAO catalog, and some may be stellar associations in the LMC not listed by Lucke and Hodge [19]. They are worthy of further study by higher-resolution far-UV imagery and spectrographically (such as with the IUE satellite or a Space-lab experiment). Likewise, more detailed far-UV measurements of the known associations, as well as more accurate ground-based photometry and spectrophotometry thereof, would be useful for determinations of stellar flux distributions, interstellar extinction laws, and the distributions of interstellar gas and dust in the LMC.

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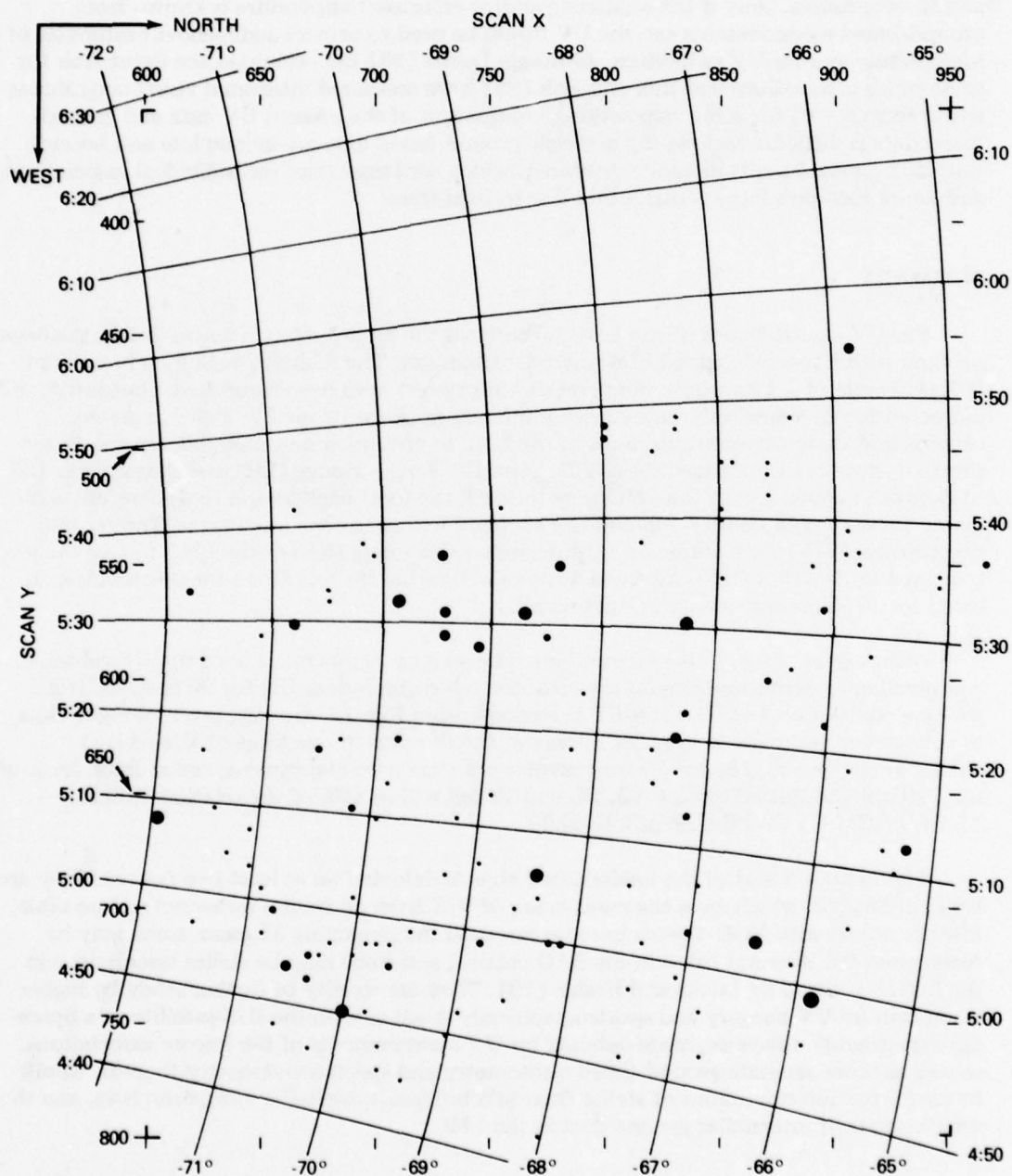


Fig. 20 — Plot of unidentified objects in the LMC measured on at least two frames.
The size of the dot is a rough indication of the mean V/E.

Table 3 — Unidentified Far-UV Sources in the LMC

| A129 | 1950 | | V/E | Measured Frames | Size (arc-min) | Nearby Objects | NGC No. and Description* | m _v |
|------|------|-----|--------|--------------------|-------------------|-------------------|--|----------------|
| | x | y | R.A. | Dec. | | | | |
| 770 | 794 | 794 | 4:43.7 | -68:04 | 6 | 124-130 | 1693??, Faint(F), Small(S) | 10.0 |
| 711 | 744 | 744 | 4:45.4 | -69:19 | 8 | 124-130 | — | |
| 703 | 770 | 770 | 4:45.5 | -69:32 | 9 | 124-130 | — | |
| 671 | 760 | 760 | 4:46.3 | -70:15 | 16 | 124-130 | — | |
| 704 | 763 | 763 | 4:47.3 | -69:36 | 8 | 124-130 | 1693?1695?, F, S | |
| 654 | 750 | 750 | 4:47.8 | -70:37 | 7 | 124-130 | — | |
| 728 | 755 | 755 | 4:50.2 | -69:06 | 10 | 125-130 | 1698?, Pretty bright(pB), pS | |
| 694 | 747 | 747 | 4:50.4 | -69:50 | 34 | 124-130 | 1704?, F, pS | |
| 684 | 742 | 742 | 4:51.2 | -70:04 | 150 | 124-130 | 1711, Bright(B), S, Glob Cl | |
| 803 | 766 | 766 | 4:51.3 | -67:32 | 6 | 125-130 | — | |
| 840 | 770 | 770 | 4:52.1 | -66:47 | 25 | 124-130 | 1714?, vB, S, 1715??, vF, S | 10.0 |
| 849 | 773 | 773 | 4:52.6 | -66:36 | 3 | 129, 130 | — | |
| 670 | 730 | 730 | 4:53.0 | -70:24 | 26 | 124-130 | 1754??, F, S | |
| 847 | 766 | 766 | 4:53.2 | -66:40 | 165 | 124, 125 | — | |
| 739 | 742 | 742 | 4:53.3 | -68:56 | 81 | 124, 130 | 1734?, pB, Large(L) | |
| 757 | 744 | 744 | 4:54.0 | -68:34 | 2 | 129, 130 | — | |
| 658 | 725 | 725 | 4:54.1 | -70:40 | 38 | 124-130 | 1754?, F, S, 1766??, cF, S | |
| 757 | 742 | 742 | 4:54.4 | -68:35 | 10 | 124, 125 | 1734??, pB, L, 1749??, vF | |
| 677 | 723 | 723 | 4:55.0 | -70:18 | 8 | 124-130 | 1754??, F, S, 1766?, cF, S | |
| 704 | 725 | 725 | 4:55.3 | -70:26 | 28 | 124-130 | 1754?, F, S, 1766??, cF, S | |
| 713 | 725 | 725 | 4:55.4 | -69:44 | 57 | 124-130 | 1751??, eF, pL, 1767?? | 10.0 |
| 772 | 740 | 740 | 4:55.5 | -69:28 | 783 | 124-130 | 1767, 1782, pB, S, Glob Cl | |
| 644 | 717 | 717 | 4:55.6 | -70:56 | 47 | 124-130 | 1755, vB, pL | |
| 881 | 761 | 761 | 4:55.6 | -66:00 | 20 | 124-130 | — | |
| 677 | 717 | 717 | 4:56.2 | -70:17 | 11 | 124-130 | 1766, cF, S, 1775??, eF, pL | |
| 883 | 760 | 760 | 4:56.3 | -65:56 | 13 | 124, 125 | — | |
| 688 | 718 | 718 | 4:56.5 | -70:03 | 24 | 124-130 | 1766??, cF, S | |
| 839 | 744 | 744 | 4:57.1 | -66:54 | 16 | 129, 130 | 1760??, vF, S, 1761??, cF, L, 1763??, vB, vL | |
| 650 | 709 | 709 | 4:57.4 | -70:53 | 23 | 124-130 | — | |
| 696 | 716 | 716 | 4:57.4 | -69:55 | 23 | 125-130 | — | |
| 698 | 717 | 717 | 4:57.5 | -69:51 | 28 | 124, 125 | — | |
| 841 | 743 | 743 | 4:57.7 | -66:53 | 13 | 124, 125 | — | 10.5, 10.0 |
| 732 | 732 | 732 | 4:57.8 | -67:32 | 33 | 124-130 | 1774??, B, S, Neb, 1786??, vB, pS | |
| 704 | 715 | 715 | 4:57.9 | -69:44 | 24 | 124-130 | 1772??, pB, pS, 1782??, pB, S, Glob Cl | |

Table continues.

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Table 3 (Continued) — Unidentified Far-UV Sources in the LMC

| A129 | | 1950 | | V/E | Measured Frames | Size (arc-min) | Nearby Objects | NGC No. and Description* | m _v |
|------|-----|--------|--------|------|--------------------|-------------------|-------------------|--|----------------|
| x | y | R.A. | Dec. | | | | | | |
| 778 | 727 | 4:58.1 | -68:10 | 1 | 129, 130 | 2.4 × 2.4 | — | — | |
| 696 | 712 | 4:58.2 | -69:55 | 23 | 124-130 | 3.6 × 4.8 | — | — | |
| 746 | 716 | 4:59.2 | -68:52 | 94 | 124-130 | 7.2 × 8.4 | N92 | 1785? | |
| 890 | 741 | 4:59.7 | -65:55 | 1255 | 124-130 | 22.5 × 20.0 | LH15 | 1787, vL Cl | |
| 654 | 700 | 4:59.9 | -70:51 | 33 | 124-130 | 4.8 × 4.8 | — | — | |
| 716 | 707 | 4:59.9 | -69:31 | 5 | 125-130 | 3.6 × 2.4 | — | 1793?, F, S | |
| 828 | 726 | 5:00.4 | -67:09 | 14 | 124-130 | 3.6 × 4.8 | — | — | |
| 727 | 707 | 5:00.6 | -69:18 | 5 | 124-130 | 2.4 × 2.4 | — | 1801?, F, pL, 1804?, F, S | |
| 780 | 714 | 5:00.9 | -68:10 | 34 | 124-130 | 4.8 × 7.2 | — | 1806?, pB, L | 11.5 |
| 776 | 712 | 5:01.2 | -68:18 | 66 | 124-130 | 7.2 × 6.6 | — | 1806?, pB, L | 11.5 |
| 819 | 719 | 5:01.6 | -67:24 | 7 | 124-130 | 2.4 × 2.4 | — | — | |
| 691 | 695 | 5:02.0 | -70:05 | 12 | 124-130 | 4.2 × 4.2 | — | 1813?, vF, S | |
| 880 | 726 | 5:02.2 | -66:08 | 370 | 124-130 | 11.9 × 14.3 | N13 | 1805, B, vS+Ne | 10.5 |
| 651 | 687 | 5:02.4 | -70:57 | 7 | 124-130 | 2.4 × 2.4 | — | 1815?, F, vS | |
| 852 | 716 | 5:03.0 | -66:44 | 9 | 129, 130 | 3.6 × 3.6 | — | 1810?, cF, S, Glob Cl | |
| 837 | 713 | 5:03.6 | -67:01 | 41 | 124-130 | 6.6 × 6.0 | — | — | |
| 758 | 698 | 5:03.7 | -68:40 | 12 | 124-130 | 3.6 × 2.4 | — | 1825?? | |
| 642 | 679 | 5:04.2 | -71:09 | 8 | 124-130 | 2.4 × 2.4 | — | — | |
| 865 | 713 | 5:04.3 | -66:28 | 291 | 124-130 | 10.0 × 11.3 | — | 1818, vB, pL, Glob Cl | 10.0 |
| 768 | 693 | 5:04.4 | -68:29 | 22 | 124-130 | 4.8 × 4.2 | — | — | |
| 727 | 687 | 5:04.8 | -69:19 | 16 | 124-130 | 2.4 × 2.4 | — | 1828?, F, S, 1830, F, pS, 1835?, cB, S | 10.0 |
| 903 | 711 | 5:05.4 | -65:42 | 21 | 124-130 | 4.8 × 4.8 | — | — | |
| 635 | 673 | 5:05.6 | -71:19 | 17 | 124-130 | 4.2 × 4.8 | — | — | |
| 842 | 692 | 5:06.6 | -67:01 | 8 | 124, 125 | 2.4 × 2.4 | — | — | |
| 769 | 684 | 5:06.9 | -68:28 | 347 | 124-130 | 14.3 × 9.5 | — | 1838?, L, Cl | |
| 809 | 688 | 5:07.0 | -67:39 | 12 | 124-130 | 3.0 × 3.0 | N21 | 1844??, pF, pL, 1846?, pB, cL | 11.5 |
| 724 | 670 | 5:07.1 | -69:26 | 9 | 124, 125 | 2.4 × 2.4 | — | — | |
| 744 | 678 | 5:07.4 | -69:00 | 11 | 124-130 | 3.6 × 3.0 | N101, LH27 | 1847?, B, S | |
| 841 | 689 | 5:07.9 | -66:59 | 1 | 129, 130 | 2.4 × 2.4 | — | — | |
| 606 | 660 | 5:08.0 | -71:57 | 385 | 124-130 | 6.6 × 6.6 | — | 1840??, F | |
| 646 | 663 | 5:08.2 | -71:05 | 12 | 124-130 | 2.4 × 3.0 | — | 1848?, cL, Cl | |
| 723 | 667 | 5:09.4 | -69:31 | 6 | 129, 130 | 4.2 × 3.0 | — | — | |
| 629 | 655 | 5:10.2 | -71:29 | 25 | 124-130 | 6.0 × 4.2 | — | — | |
| 923 | 687 | 5:10.4 | -65:25 | 23 | 124-130 | 6.0 × 4.8 | — | — | |
| 687 | 658 | 5:10.6 | -70:14 | 37 | 124-130 | 7.2 × 4.8 | — | — | |

Table continues.

Table 3 (Continued) — Unidentified Far-UV Sources in the LMC

| A129 | | 1950 | | V/E | Measured Frames | Size (arc-min) | Nearby Objects | NGC No. and Description* | m _v |
|------|-----|--------|--------|------|--------------------|-------------------|-------------------|---------------------------------|----------------|
| x | y | R.A. | Dec. | | | | | | |
| 702 | 658 | 5:10.9 | -69:56 | 9 | 124-130 | 3.6 × 2.4 | — | — | 10.0 |
| 921 | 673 | 5:13.1 | -65:28 | 9 | 124-130 | 3.6 × 3.6 | — | 1866,vB,L | |
| 704 | 647 | 5:13.3 | -69:53 | 5 | 124-130 | 2.4 × 2.4 | — | — | |
| 749 | 648 | 5:13.9 | -68:59 | 1 | 129, 130 | 2.4 × 2.4 | — | — | 10.0 |
| 834 | 658 | 5:14.1 | -67:11 | 67 | 124-130 | 6.0 × 7.2 | N30 | 1873??,cL | |
| 623 | 631 | 5:16.0 | -71:38 | 5 | 124-130 | 2.4 × 2.4 | — | — | |
| 673 | 630 | 5:16.7 | -70:37 | 43 | 124-130 | 6.0 × 4.8 | — | — | 10.0 |
| 819 | 643 | 5:16.8 | -67:31 | 11 | 125-130 | 3.6 × 2.4 | — | 1895??,pF,pL | |
| 685 | 627 | 5:17.7 | -70:21 | 10 | 124-130 | 2.4 × 2.4 | — | — | |
| 829 | 639 | 5:18.1 | -67:18 | 18 | 125-130 | 4.8 × 4.8 | — | 1905,F,S | 10.0 |
| 708 | 626 | 5:18.2 | -69:53 | 70 | 124-130 | 7.2 × 6.0 | N116, 121 | 1905??,F,S | |
| 823 | 631 | 5:18.6 | -67:30 | 11 | 124-130 | 2.4 × 2.4 | — | — | |
| 904 | 640 | 5:19.0 | -65:51 | 17 | 124-130 | 3.6 × 4.8 | — | — | 10.0 |
| 785 | 626 | 5:19.1 | -68:16 | 14 | 124-130 | 3.6 × 3.6 | — | — | |
| 727 | 617 | 5:10.2 | -69:29 | 132 | 129, 130 | 8.4 × 10.7 | N119, 122, LH46 | 1922,1926?,pB,pL | |
| 830 | 626 | 5:20.4 | -67:21 | 54 | 124-130 | 6.0 × 6.6 | — | — | 10.0 |
| 838 | 613 | 5:22.9 | -67:12 | 45 | 124-130 | 7.2 × 4.8 | — | 1940,pB,vS | |
| 895 | 619 | 5:22.0 | -66:04 | 62 | 124-130 | 7.2 × 6.6 | — | 1932?,pB,S | |
| 788 | 607 | 5:23.5 | -68:13 | 13 | 124-130 | 3.6 × 3.0 | — | — | 10.0 |
| 863 | 612 | 5:23.6 | -66:41 | 36 | 129, 130 | 5.4 × 5.4 | N45 | 1941??,vS Neb | |
| 709 | 598 | 5:24.9 | -69:53 | 44 | 125-130 | 4.8 × 6.0 | N131 | 1950? | |
| 624 | 593 | 5:25.8 | -71:40 | 8 | 124-130 | 2.4 × 2.4 | — | — | 10.0 |
| 868 | 600 | 5:26.1 | -66:37 | 98 | 124-130 | 7.2 × 7.2 | N48 | 1951,B,L | |
| 727 | 589 | 5:26.6 | -69:30 | 121 | 124-130 | 7.2 × 7.2 | N142 | — | |
| 710 | 587 | 5:27.0 | -69:51 | 213 | 124-130 | 9.0 × 13.1 | N134, LH59 | 1969,F,S,1971 | 10.0 |
| 880 | 595 | 5:27.1 | -66:24 | 40 | 124-130 | 4.8 × 8.4 | N48 | — | |
| 648 | 581 | 5:28.2 | -71:11 | 6 | 124-130 | 2.4 × 3.6 | N206 | — | |
| 745 | 583 | 5:28.3 | -69:09 | 184 | 124, 125 | 6.0 × 6.6 | N145 | 1984?,Cl,1994,Cl,eS | 10.0 |
| 916 | 592 | 5:28.4 | -65:40 | 15 | 124-130 | 3.6 × 4.8 | — | — | |
| 969 | 590 | 5:28.6 | -64:40 | 1 | 129, 130 | 2.4 × 2.4 | — | — | |
| 729 | 579 | 5:29.0 | -69:29 | 39 | 124, 9, 0 | 4.8 × 6.0 | — | — | 10.0 |
| 775 | 579 | 5:29.2 | -68:30 | 72 | 124-130 | 6.0 × 7.2 | — | 2001??,Cl,13 ^m stars | |
| 664 | 575 | 5:29.9 | -70:50 | 150 | 124-130 | 6.6 × 8.4 | N206 | 2010,F,Cl | |
| 836 | 575 | 5:30.3 | -67:17 | 1270 | 124, 5, 0 | 15.5 × 13.1 | N54, LH70 | 2004,B,pL,Glob Cl | 10.0 |
| 731 | 570 | 5:30.8 | -69:27 | 45 | 124-130 | 4.8 × 6.0 | — | 2009??,pF,pS | |

Table continues.

Table 3 (Continued) — Unidentified Far-UV Sources in the LMC

| A129 | | 1950 | | V/E | Measured Frames | Size (arc-min) | Nearby Objects | NGC No. and Description* | m_v |
|------|-----|--------|--------|-----|--------------------|-------------------|-------------------|---|-------|
| x | y | R.A. | Dec. | | | | | | |
| 764 | 571 | 5:31.1 | -68:45 | 507 | 124, 125 | 7.8 X 7.8 | LH64, 68 | 2001?, Cl, 13 ^m stars | |
| 850 | 572 | 5:31.3 | -67:01 | 845 | 129, 130 | 13.1 X 19.1 | — | 2006, eL, Cl | |
| 739 | 567 | 5:31.6 | -69:17 | 954 | 124-130 | 14.3 X 17.9 | LH67, 74 | 2015, vL, Cl | |
| 893 | 572 | 5:31.8 | -66:07 | 34 | 124-130 | 5.4 X 6.0 | — | — | |
| 823 | 567 | 5:32.0 | -67:33 | 175 | 129, 130 | 7.8 X 9.0 | N57, 58 | 2011, vB, S | 9.5 |
| 709 | 566 | 5:32.2 | -69:55 | 477 | 124-130 | 8.4 X 9.5 | — | 2016?, F, vL, HD269696 B star | 10.7 |
| 682 | 564 | 5:32.7 | -70:28 | 9 | 124-130 | 2.4 X 3.0 | — | — | |
| 622 | 563 | 5:33.1 | -71:46 | 49 | 124-130 | 4.2 X 4.8 | — | 2025, vB, vS | |
| 946 | 550 | 5:35.0 | -65:06 | 10 | 124-130 | 2.4 X 2.4 | — | — | |
| 779 | 551 | 5:35.4 | -68:28 | 34 | 124-130 | 4.8 X 4.8 | LH85 | 2042?, vL, Cl, stars 12-15 ^m | |
| 889 | 550 | 5:35.7 | -66:14 | 4 | 124-130 | 2.4 X 2.4 | N62 | 2030?, pB, L | |
| 964 | 552 | 5:36.3 | -64:45 | 30 | 124-130 | 4.8 X 4.2 | — | — | |
| 912 | 547 | 5:37.0 | -65:47 | 8 | 124-130 | 2.4 X 2.4 | — | — | |
| 696 | 543 | 5:37.6 | -70:10 | 10 | 124-130 | 3.0 X 3.0 | — | 2066, vF, vS, 2072?, vF, S | |
| 814 | 540 | 5:37.6 | -67:44 | 25 | 124-130 | 4.8 X 4.8 | — | — | |
| 906 | 538 | 5:38.3 | -65:53 | 11 | 124-130 | 3.6 X 2.4 | — | — | |
| 848 | 526 | 5:40.9 | -67:04 | 2 | 125-130 | 2.4 X 2.4 | — | — | |
| 663 | 526 | 5:41.9 | -70:52 | 9 | 124-130 | 2.4 X 2.4 | N216 | 2060?, vF, pS | |
| 865 | 519 | 5:42.0 | -66:40 | 15 | 124-130 | 3.6 X 3.6 | — | — | |
| 985 | 519 | 5:42.0 | -64:22 | 8 | 124-130 | 2.4 X 2.4 | — | — | |
| 870 | 506 | 5:44.6 | -66:38 | 16 | 124-130 | 3.0 X 4.2 | — | 2082, pF, L | 13.0 |
| 849 | 505 | 5:45.2 | -67:03 | 20 | 124-130 | 3.6 X 3.6 | — | 2105?, F, pS | |
| 829 | 494 | 5:47.6 | -67:28 | 12 | 124-130 | 3.6 X 2.4 | — | — | |
| 801 | 494 | 5:47.8 | -68:00 | 55 | 124-130 | 6.0 X 6.0 | — | 2117, F, pL | |
| 984 | 489 | 5:47.9 | -64:25 | 189 | 124-130 | 10.1 X 9.5 | — | — | |
| 879 | 485 | 5:49.0 | -66:28 | 6 | 124-130 | 2.4 X 2.4 | — | — | |
| 905 | 454 | 5:55.1 | -65:55 | 130 | 124-130 | 9.5 X 9.5 | — | 2138?, eF, S | |

*A query (?) after the NGC No. means that the position matches poorly; a double query (??) means a very poor match (omitted from Appendix B). The description of brightness, size, and type of object is from the NGC as printed in the Revised New General Catalog of Non-stellar Astronomical Objects [27]. In 17 cases, two or more objects are listed, including HD269696, a foreground B star identified by Karl Henize. The 20 NGC Nos. without queries are fairly likely, but not certain, identifications.

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REFERENCES

1. G.R. Carruthers and T. Page, "Far-UV Camera/Spectrograph," Chapt. 13 in *Apollo 16 Preliminary Science Report*, NASA SP-315, 1972.
2. G.R. Carruthers, "Apollo 16 Far-Ultraviolet Camera/Spectrograph: Instrument and Operations," *Applied Optics* 12, 2501 (1973).
3. G.R. Carruthers and T. Page, "Apollo 16 Far-Ultraviolet Imagery of the Polar Auroras, Tropical Airglow Belts, and General Airglow," *J. Geophys. Res.* 81, 483 (1976).
4. G.R. Carruthers, T. Page, and R.R. Meier, "Apollo 16 Lyman-Alpha Imagery of the Hydrogen Geocorona," *J. Geophys. Res.* 81, 1664 (1976).
5. G.R. Carruthers and T. Page, "Apollo 16 Far-Ultraviolet Spectra of the Terrestrial Airglow," *J. Geophys. Res.* 81, 1683 (1976).
6. G.R. Carruthers and T. Page, "Far-Ultraviolet Brightness of Nebulae in Cygnus," *Astrophys. J.* 205, 397 (1976).
7. T. Page, G.R. Carruthers, and R. Hill, "S201 Catalog of Far-Ultraviolet Objects," NRL Report 8173, Jan. 1978.
8. G.R. Carruthers and T. Page, "Apollo-16 Far-Ultraviolet Spectra in the Large Magellanic Cloud," *Astrophys. J.* 211, 728 (1977).
9. T.L. Page and G.R. Carruthers, "Apollo 16 Far-Ultraviolet Imagery and Spectra of the Large Magellanic Cloud," *COSPAR Space Research* 17, 749 (1977).
10. J. Borgman, R.J. van Duinen, and J. Koornneef, "Ultraviolet Observations of Associations in the Large Magellanic Cloud," *Astron. & Astrophys.* 40, 461 (1975).
11. J. Borgman and A.C. Danks, "Interstellar Extinction and Stellar Population in the 30 Doradus Region," *Astron. Astrophys.* 54, 41 (1977).
12. J. Koornneef, "On the Anomaly of the Far UV Extinction in the 30 Doradus Region," *Astron. Astrophys.*, in press (1978).
13. R.C. Bless and B.D. Savage, "Ultraviolet Photometry From the Orbiting Astronomical Observatory, II-Interstellar Extinction," *Astrophys. J.* 171, 293 (1972).
14. R.C. Henry, P.D. Feldman, and W.G. Fastie, "Apollo 17 Far-Ultraviolet Spectra in the Large Magellanic Cloud," *Astron Astrophys.* 53, 317 (1976).
15. K.G. Henize, private communication, 1974.
16. A.M. Smith, private communication, 1976.

PAGE AND CARRUTHERS

17. K.G. Henize, "Catalogues of H α -Emission Stars and Nebulae in the Magellanic Clouds," *Astrophys. J. (Suppl.)* **2**, 315 (1956).
18. L. Doherty, K.G. Henize, and L.H. Aller, "A Photometric Catalogue of Emission Nebulosities in the Large Magellanic Cloud," *Astrophys. J. (Suppl.)* **2**, 345 (1956).
19. P.B. Lucke and P.W. Hodge, "A Catalogue of Stellar Associations in the Large Magellanic Cloud," *Astron. J.*, **75**, 171 (1970).
20. P.B. Lucke, "The OB Stellar Associations in the Large Magellanic Cloud," *Astrophys. J. (Suppl.)* **28**, 73 (1974).
21. P.W. Hodge and F.W. Wright, *The Large Magellanic Cloud*, Smithsonian Press, Washington, D.C., 1967.
22. A. Ardeberg, J.-P. Brunet, E. Maurice, and L. Prévot, "Spectrographic and Photometric Observations of Supergiants and Foreground Stars, in the Direction of the Large Magellanic Cloud," *Astron. Astrophys. (Suppl.)* **6**, 249 (1972).
23. N. Walborn, "Spectral Classification of O and B0 Supergiants in the Magellanic Clouds," *Astrophys. J.*, **215**, 53 (1977).
24. *Smithsonian Astrophysical Observatory Star Catalog*, in four volumes, Smithsonian Institution, Washington, D.C., 1966.
25. R.L. Kurucz, E. Peytremann, and E.A. Avrett, *Blanketed Model Atmospheres for Early Type Stars*, Smithsonian Press, Washington, D.C., 1974.
26. B.J. Bok and P.F. Bok, "Integrated Magnitudes and Colors of Young Associations in the Large Magellanic Cloud," *Monthly Notices of the Royal Astron. Soc.* **124**, 435 (1962).
27. J.W. Sulentic and W.G. Tifft, *Revised New General Catalog of Non-Stellar Astronomical Objects*, Univ. of Arizona Press, 1973.
28. A.J. Cannon, *Henry Draper Catalog*, Annals of the Harvard College Observatory, Vols. 91-100 and 112 (1918-1936 and 1949), Cambridge, Mass.

Appendix A

S201-ATLAS-LISTING TAPE AND LINEARIZED-DENSITY-MOSAIC TAPES

The listing in Appendix B of this Atlas is available on seven-track, 800-bit-per-inch, odd-parity tape. The tape was written on a Univac 1110 computer under the EXEC VIII operating system using Fortran-formatted write statements. Thus the file structure is of the Univac SDF sequential formatted record type. A more detailed description of this format can be found in the Sperry Univac 1100 Series Fortran V Library Programmer Reference (UP-7876).

There is one data file on this tape, consisting of 1757 data records of 132 field data characters each. The first data record contains a title line, "S201 FAR-UV ATLAS OF THE LARGE MAGELLANIC CLOUD." This is followed by a 132-character line of column headings, as in Appendix B (but not repeated). The meanings of the remaining 1755 data records are given in Tables A1 and A2. To accommodate groups of LH objects (see text), there is a different line format for them (Table A2). Character 31 specifies the group-data-line format.

The Atlas tape file ends with a software end-of-file mark and a hardware end-of-file mark. Table A3 gives a simple Fortran program for reading the Atlas tape. The tape has been checked for errors, using this program.

Two linearized-density-mosaic tapes provide the mosaics of D_L values used in summing density volumes from frames A124 and A125 (on one tape) and A129 and A130 (on the other tape). These two tapes were written on a Univac 1108 under the EXEC II operating system, and each contains two files, one for each frame, covering the area from $x = 475$ to $x = 986$ and from $y = 381$ to $y = 830$. Each file ends with a software end-of-file mark and a hardware end-of-file mark. The simple Fortran program in Table A3 will print out the mosaics in convenient form. The mosaics are each 145 pages long; in pairs (290 pages) they require larger-than-normal storage.

Other programs can be written for listing single Lucke-Hodge objects, selecting characters 68-72 with no parentheses and no asterisk in 30, for listing Henize nebulas, selecting characters 91-98 with no parentheses, and for listing unidentified objects, selecting double minus characters 119-120 and parentheses or nothing in 68-76 and 91-97.

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Table A1 — Meanings of Characters in a Normal Data Line

| Characters | Meaning (digits right-justified) |
|------------|--|
| 2-4 | Frame number |
| 6-8 | x raster coordinate |
| 10-12 | y raster coordinate |
| 14 | Hours of right ascension |
| 15 | Separator (:)) |
| 16-19 | Minutes of right ascension rounded to tenths |
| 21-23 | Degrees of declination |
| 24 | Separator (:)) |
| 25-26 | Arc-minutes of declination |
| 28-29 | x-raster interval summed (*X) |
| 30 | X (times) |
| 31-32 | y-raster interval summed (*Y) |
| 33 | An asterisk (*) indicates that area *X*Y is <i>not</i> rectangular |
| 34-36 | Peak density at center of image (P) |
| 37 | An asterisk (*) indicates P is <i>not</i> a maximum |
| 38-40 | Background density (BG) |
| 42-46 | Density volume of area summed (V) |
| 48-49 | Exposure time in minutes (E) |
| 50 | Filter type (L or C) |
| 52-56 | Density volume divided by exposure time (V/E) |
| 57 | An asterisk (*) indicates that the density exceeds 600 |
| 58-60 | Reddening, RE = E(B - V), in magnitudes, rounded to hundredths |
| 61 | An asterisk (*) indicates an RE value observed by Lucke |
| 62-66 | Unreddened UV flux (UF) |
| 68-76 | LH followed by one- to three-digit numbers are LH objects, parentheses mean that the Lucke-Hodge area overlaps the area summed; SAO followed by six digits means a foreground star near the area summed |
| 76-79 | North-south extent of LH object in arc-minutes rounded to tenths |
| 81-84 | East-west extent of LH object in arc-minutes rounded to tenths |
| 86-89 | Number of blue stars in LH object (BS) |
| 91-98 | Numbers and letters of Henize nebula or nebulas (N NO.); parentheses mean that the nebula area overlaps the LH area summed |
| 98-103 | H α flux in units of 10^{-4} erg/s \cdot cm 2 \cdot sterad, rounded to tenths, from Henize nebula or nebulae (HA) |
| 105-109 | Hydrogen index, HI = HA/UF, rounded to hundredths |
| 109-110 | An asterisk (*) indicates an uncertain HI value; V < 10 |
| 111-120 | Numbers separated by a comma or dash are NGC numbers associated with the LH object; in one case the number starts with IC; in a few cases an LH number in parentheses or an SAO number in parentheses indicates overlaps |
| 119-124 | Six-digit number of an SAO star |
| 125 | A query (?) indicates an uncertain SAO identification; the letter H (one case) indicates that the number is in the HD Catalog |
| 126-129 | Visual magnitude of an SAO star, rounded to tenths (M) |
| 131-132 | Letter and digit for spectral type of an SAO star (SP) |

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Table A2 — Meanings of Characters in a Group Data Line

| Characters | Meaning (digits right-justified) |
|------------|---|
| 2-4 | Frame number |
| 6-8 | x raster coordinate |
| 10-12 | y raster coordinate |
| 14 | Hours or right ascension (R.A.) |
| 15 | Separator (:) |
| 16-19 | Minutes of right ascension rounded to tenths |
| 21-23 | Degrees of declination |
| 24 | Separator (:) |
| 25-26 | Arc-minutes of declination |
| 28-30 | Number of pixels summed in a group of LH objects |
| 31 | An asterisk (*) indicates a <i>group data line</i> |
| 34-36 | Peak density at center of group image (P) |
| 37 | An asterisk (*) indicates that P is <i>not</i> a maximum |
| 38-40 | Background density (BG) |
| 42-46 | Density volume in the group area summed |
| 48-49 | Exposure time in minutes |
| 50 | Filter type (L or C) |
| 52-56 | Density volume divided by exposure time (V/E) |
| 57 | An asterisk (*) indicates that the density exceeds 600 |
| 58-60 | Reddening, $RE = E(B - V)$, in magnitudes, rounded to hundredths |
| 61 | An asterisk (*) indicates an RE value observed by Lucke |
| 62-66 | Unreddened UV flux (UF) |
| 68-77 | LH followed by one- to three-digit numbers that are separated by commas are LH objects in the group |
| 79-83 | Total area of the LH group in $(\text{arc-min})^2$ rounded to tenths |
| 82-83 | An asterisk (*) indicates a group |
| 86-88 | Total number of blue stars in the LH group (BS) |
| 91-98 | Numbers of Henize nebulas overlapping the LH group |
| 111-117 | NGC numbers associated with LH objects in the group |

Table A3 — Simple Fortran Program for Reading the LMC Atlas and Mosaic Tapes

| | |
|---------|-----------------------------|
| Line 1: | DIMENSION LINE(22) |
| 2: | REWIND 1 |
| 3: | 5 READ(1,1000,END=100) LINE |
| 4: | 1000 FORMAT (22A6) |
| 5: | WRITE(6,1000) LINE |
| 6: | GO TO 5 |
| 7: | 100 STOP |
| 8: | END |

Appendix B

S201 ATLAS LISTING OF FAR-UV OBJECTS IN THE AREA OF THE LARGE MAGELLANIC CLOUD

The S201 Atlas listing contains 458 far-UV objects in the LMC area, each detected on one or more of the four frames: A124 (1-min ILi exposure), A125 (3-min ILi exposure), A129 (10-min ICa exposure) and A130 (30-min ICa exposure). There are 26 columns, listing data from four other catalogs, as well as S201 measurements of far-UV flux from 122 Lucke-Hodge associations [19] with associated NGC objects, from 156 Henize nebulas [17], and from 20 SAO foreground stars [24]. The column entries are defined as follows, with asterisks on column entries flagging peculiar entries as noted:

| | |
|------|--|
| FR. | S201 Apollo frame number |
| X | x coordinate in the PDS microdensitometer scan |
| Y | y coordinate on the PDS microdensitometer scan |
| R.A. | right ascension for the 1950 epoch in hours and minutes (to tenths of minutes), obtained from the LH, Henize, or SAO catalog for objects therein and from the xy coordinates for unidentified objects |
| DEC. | declination for the 1950 epoch in degrees and arc-minutes, obtained from the LH, Henize, or SAO catalog for objects therein and from the xy coordinates for unidentified objects |
| *X | number of pixels summed along the x axis, centered at X |
| *Y | number of pixels summed along the y axis, centered at Y. A multiplication sign between the two values *X and *Y indicates that the cataloged size of the object is matched by an area $\Delta x \Delta y$ in units of the area of one pixel; an asterisk indicates that the $\Delta x \Delta y$ area is <i>not</i> a rectangle but is slanted or curved. For grouped images the total number of pixels summed is listed as a single value followed by an asterisk, instead of being listed as a product of two values. |
| P | The central (peak) density of the image, corrected for nonlinear response but <i>not</i> for PDS lag. An asterisk indicates that the image center (pixel at x, y) is <i>not</i> a density maximum. |
| BG | the local background density, obtained by averaging the four density values on the centers of the four sides of the rectangle $\Delta x \Delta y$ from the mosaic of density values corrected for nonlinear response. In some images BG has a 1/2-density-unit remainder, and the listed value has been rounded upward to a whole number and is 1/2 density-unit high. |
| V | density volume = $\Sigma(D - BG)$ over the summed $\Delta x \Delta y$ |
| E, F | exposure time, in minutes, and filter (L = LiF, with passband 1050 to 1600 Å; C = CaF ₂ , with passband 1250 to 1600 Å) |
| V/E | density volume divided by exposure, a measure of the flux reaching the S201 camera. An asterisk indicates densities > 600. |
| RE | color excess in magnitudes. An asterisk indicates values measured by Lucke [20]; other values are interpolated from the contour plot, Fig. 14. |

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| | |
|---------|--|
| | Lucke's values of $E(B - V)$ in the LMC have been increased by 0.05 magnitude for foreground reddening (Borgman et al. [10,11]). |
| UF | far-UV flux V/E corrected for extinction based on RE. A dash indicates a value of $V/E < 0$. For ILi frames $UF = (V/E)10^{2.19(RE)}$. For ICa frames $UF = (V/E)10^{1.67(RE)}$. |
| LH NO. | number of association or cloud in the Lucke-Hodge catalog [19]. Numbers in parentheses are assumed to be associated with the Henize nebulas listed under N NO. or are other, overlapping LH numbers. In 23 cases, groups of two or more LH numbers are listed. |
| SIZE | dimensions of the LH association or cloud in arc-minutes north-south (along scan x) and east-west (along scan y). The summed area $\Delta x \Delta y$ was generally one raster larger in each dimension to allow for the S201 camera resolution of 3 arc-minutes. (One raster = $33 \mu m$ on the film = 1.19 arc-minutes in the sky.) In 37 cases the area published by Lucke [20] does not agree with these dimensions, which are presumably only rough estimates. For grouped images the total area in (arc-minutes) ² is listed, followed by an asterisk. |
| BS | number of blue stars (Lucke's count [20]) in the LH association or cloud |
| N NO. | number of a nebula in the Henize catalog [17]. In many cases, the summed area $\Delta x \Delta y$ corresponds to several Henize nebulas; for example, 77A-E means N77A and N77B and N77C and N77D and N77E, 8, A means N8 and N8A and 26, 27 means N26 and N27. These combinations were selected after plotting the nebula positions and dimensions on a mosaic of density vs x, y. The N numbers in parentheses are near unidentified images (density maxima on two or more frames). |
| HA | Henize's $H\alpha$ intensity estimate calibrated by Dougherty, Henize, and Aller [18] in $H\alpha$ -flux units of $10^{-4} \text{ erg/s} \cdot \text{cm}^2 \cdot \text{sterad}$ summed for all nebulas listed under N NO. Their calibration was as follows: Henize "T" = $1.0 \times 10^{-4} \text{ erg/s} \cdot \text{cm}^2 \cdot \text{sterad} \cdot \text{pixel}$, Henize "1" = $2.0 \times 10^{-4} \text{ erg/s} \cdot \text{cm}^2 \cdot \text{sterad} \cdot \text{pixel}$, Henize "2" = $4.5 \times 10^{-4} \text{ erg/s} \cdot \text{cm}^2 \cdot \text{sterad} \cdot \text{pixel}$, Henize "3" = $7.0 \times 10^{-4} \text{ erg/s} \cdot \text{cm}^2 \cdot \text{sterad} \cdot \text{pixel}$, Henize "4" = $9.5 \times 10^{-4} \text{ erg/s} \cdot \text{cm}^2 \cdot \text{sterad} \cdot \text{pixel}$, Henize "5" = $12.0 \times 10^{-4} \text{ erg/s} \cdot \text{cm}^2 \cdot \text{sterad} \cdot \text{pixel}$. Hence the $H\alpha$ intensity of N5, Henize "Int 2," dimensions 199 by 202 arc-seconds, or 2.8×2.8 pixels, is $4.5 \times 10^{-4} (2.8 \times 2.8) = 35.2 \times 10^{-4} \text{ erg/s} \cdot \text{cm}^2 \cdot \text{sterad}$. For N77A-E, the contributions of the five overlapping parts are $1.80 + 1.40 + 0.63 + 5.67 + 98.2 = 107.7$, and the dimensions are 299 by 370 arc-seconds, corresponding to $\Delta x = 5.2$ pixels and $\Delta y = 4.2$ pixels. The summed area is 7×6 pixels, to allow for the S201 camera resolution. |
| HI | hydrogen index, the ratio HA/UF , or $H\alpha$ flux per unit of unreddened far-UV flux. A dash indicates that the measured UF is zero or negative (due to measurement errors); an asterisk indicates an uncertain value because V is low. |
| NGC NO. | objects in Dreyer's "New General Catalogue of Nebulae and Clusters of Stars" (Mem. R.A.S. 49, Part 1, 1888) associated with LH associations or clouds. When more than two are listed by Lucke and Hodge, only the first and last are listed here. |

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SAO NO. number of a star in the Smithsonian Astrophysical Observatory catalog [24]
 identified with a measured image. In one case (R.A. = 5:32.2) a number
 from the Henry Draper Catalog [28] is given, followed by H.
M visual magnitude from the SAO catalog
SP spectral type from the SAO catalog

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| FR. | X | Y | P.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | MI | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|-----|----|-----|-----|-------|-----|--------|-----|-------|--------|------|----|-------|-----|-------|---------|---------|----|----|
| 124 | 725 | 811 | 4:38.3 | -68:55 | 3X | 5 | 75 | 66 | 85 | 1L | 85 | .05 | 111 | | | | | | | 249073 | B.1 | A0 | |
| 125 | 727 | 812 | 4:38.3 | -68:55 | 5X | 5 | 201 | 167 | 363 | 3L | 121 | .05 | 157 | | | | | | | 249073 | B.1 | A0 | |
| 129 | 725 | 812 | 4:38.3 | -68:55 | 7X | 8 | 112 | 40 | 1344 | 10C | 134 | .05 | 163 | | | | | | | 249073 | B.1 | A0 | |
| 130 | 725 | 810 | 4:38.3 | -68:55 | 9X | 9 | 331 | 91 | 5794 | 30C | 193 | .05 | 233 | | | | | | | 249073 | B.1 | A0 | |
| 124 | 772 | 800 | 4:43.1 | -68:01 | 2X | 2 | 67 | 67 | -1 | 1L | -1 | .10 | -- | | | | 2 | 3.4 | -- | | | | |
| 125 | 773 | 801 | 4:43.1 | -68:01 | 2X | 2 | 167 | 167 | -1 | 3L | 0 | .10 | -- | | | | 2 | 3.4 | -- | | | | |
| 129 | 770 | 800 | 4:43.1 | -68:01 | 2X | 2 | 40 | 41 | 2 | 10C | 0 | .10 | 0 | | | | 2 | 3.4 | 11.6* | | | | |
| 130 | 771 | 798 | 4:43.1 | -68:01 | 2X | 2 | 100 | 99 | 6 | 30C | 0 | .10 | 0 | | | | 2 | 3.4 | 11.6* | | | | |
| 124 | 632 | 764 | 4:43.5 | -71:01 | 11X | 12 | 473 | 69 | 6568 | 1L | 6568 | .05 | 8550 | | | | | | | 256122 | 5.7 | B9 | |
| 125 | 634 | 765 | 4:43.5 | -71:01 | 19X | 21 | 958 | 170 | 85950 | 3L | 28650* | .05 | 37200 | | | | | | | 256122 | 5.7 | B9 | |
| 129 | 632 | 764 | 4:43.5 | -71:01 | 18X | 19 | 917 | 38 | 97000 | 10C | 9700* | .05 | 11750 | | | | | | | 256122 | 5.7 | B9 | |
| 130 | 633 | 761 | 4:43.5 | -71:01 | 24X | 24 | 953 | 914 | 1600 | 30C | 4720* | .05 | 5710 | | | | (2) | | | 256122 | 5.7 | B9 | |
| 124 | 771 | 797 | 4:43.7 | -68:05 | 2X | 2 | 69 | 65 | 14 | 1L | 14 | .08 | 21 | | | | (2) | | | | | | |
| 125 | 770 | 799 | 4:43.7 | -68:05 | 2X | 2 | 174 | 165 | 29 | 3L | 10 | .08 | 15 | | | | (2) | | | | | | |
| 129 | 776 | 794 | 4:43.7 | -68:04 | 2X | 2 | 42 | 40 | 8 | 10C | 1 | .08 | 1 | | | | (2) | | | | | | |
| 130 | 771 | 793 | 4:43.7 | -68:04 | 3X | 3 | 96 | 91 | 26 | 30C | 1 | .08 | 1 | | | | (2) | | | | | | |
| 124 | 713 | 774 | 4:45.4 | -69:19 | 2X | 2 | 73 | 68 | 16 | 1L | 16 | .15 | 34 | | | | | | | -- | | | |
| 125 | 711 | 774 | 4:45.4 | -69:19 | 3X | 3 | 181 | 174 | 45 | 3L | 15 | .15 | 32 | | | | | | | -- | | | |
| 129 | 711 | 774 | 4:45.4 | -69:19 | 2X | 2 | 48 | 44 | 15 | 10C | 2 | .15 | 3 | | | | | | | -- | | | |
| 130 | 712 | 771 | 4:45.4 | -69:19 | 2X | 2 | 114 | 104 | 35 | 30C | 1 | .15 | 2 | | | | | | | -- | | | |
| 124 | 702 | 769 | 4:45.5 | -69:32 | 2X | 2 | 73 | 68 | 19 | 1L | 19 | .15 | 41 | | | | | | | -- | | | |
| 125 | 702 | 769 | 4:45.5 | -69:32 | 2X | 2 | 181 | 171 | 33 | 3L | 11 | .15 | 24 | | | | | | | -- | | | |
| 129 | 703 | 770 | 4:45.5 | -69:32 | 2X | 2 | 53 | 43 | 35 | 10C | 4 | .15 | 6 | | | | | | | -- | | | |
| 130 | 703 | 769 | 4:45.5 | -69:32 | 2X | 2 | 118 | 104 | 50 | 30C | 2 | .15 | 3 | | | | | | | -- | | | |
| 124 | 671 | 748 | 4:46.3 | -70:15 | 2X | 2 | 75 | 69 | 18 | 1L | 18 | .13 | 35 | | | | | | | -- | | | |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | H1 | HQC NO. | SAO NO. | M | S |
|-----|-----|-----|--------|--------|-----|----|-----|-----|------|-----|-----|-----|-----|-------------|------|-------|-------|------|----|----------|---------|----|---|
| 125 | 672 | 761 | 4:46.3 | -70:15 | 2X | 2 | 180 | 171 | 32 | 3L | 11 | .13 | 21 | | | | | | | | | | |
| 129 | 671 | 760 | 4:46.3 | -70:15 | 3X | 3 | 63 | 40 | 151 | 10C | 15 | .13 | 25 | | | | | | | | | | |
| 130 | 571 | 758 | 4:46.3 | -70:15 | 5X | 4 | 162 | 96 | 555 | 30C | 19 | .13 | 26 | | | | | | | | | | |
| 124 | 701 | 761 | 4:47.3 | -69:36 | 2X | 2 | 73 | 68 | 16 | 1L | 16 | .15 | 34 | -- | | | | | | 1693795? | | | |
| 125 | 702 | 760 | 4:47.3 | -69:36 | 3X | 3 | 181 | 175 | 39 | 3L | 13 | .15 | 28 | -- | | | | | | 1693795? | | | |
| 129 | 704 | 763 | 4:47.3 | -69:36 | 2X | 2 | 53 | 48 | 19 | 10C | 2 | .15 | 3 | -- | | | | | | 1693795? | | | |
| 130 | 703 | 761 | 4:47.3 | -69:36 | 2X | 2 | 130 | 110 | 74 | 30C | 2 | .15 | 4 | -- | | | | | | 1693795? | | | |
| 124 | 654 | 749 | 4:47.8 | -70:37 | 2X | 2 | 71 | 68 | 11 | 1L | 11 | .12 | 20 | -- | | | | | | | | | |
| 125 | 653 | 749 | 4:47.8 | -70:37 | 2X | 2 | 181 | 172 | 30 | 3L | 10 | .12 | 19 | -- | | | | | | | | | |
| 129 | 654 | 750 | 4:47.8 | -70:37 | 2X | 2 | 48 | 39 | 35 | 10C | 4 | .12 | 6 | -- | | | | | | | | | |
| 130 | 654 | 747 | 4:47.8 | -70:37 | 2X | 2 | 116 | 95 | 73 | 30C | 2 | .12 | 2 | -- | | | | | | | | | |
| 124 | 792 | 767 | 4:49.0 | -67:48 | 6X | 8 | 76 | 67 | 184 | 1L | 184 | .05 | 239 | | | | | | | 249120 | 7.8 | A2 | |
| 125 | 796 | 769 | 4:49.0 | -67:48 | 7X | 9 | 196 | 170 | 784 | 3L | 261 | .05 | 340 | | | | | | | 249120 | 7.8 | A3 | |
| 129 | 793 | 770 | 4:49.0 | -67:48 | 8X | 9 | 93 | 42 | 1726 | 10C | 173 | .05 | 209 | | | | | | | 249120 | 7.8 | A2 | |
| 124 | 753 | 764 | 4:49.2 | -68:29 | 3X | 4 | 71 | 70 | 6 | 1L | 6 | .12 | 11 | | | 76 | 4.5 | 0.41 | | | | | |
| 125 | 752 | 765 | 4:49.2 | -68:29 | 3X | 4 | 178 | 176 | 3 | 3L | 1 | .12 | 2 | | | 76 | 4.5 | 2.42 | | | | | |
| 129 | 752 | 765 | 4:49.2 | -68:29 | 3X | 4 | 41 | 41 | 2 | 10C | 0 | .12 | 0 | | | 76 | 4.5 | 14.0 | | | | | |
| 130 | 755 | 762 | 4:49.2 | -68:29 | 3X | 4 | 105 | 105 | 13 | 30C | 0 | .12 | 1 | | | 76 | 4.5 | 6.5 | | | | | |
| 124 | 718 | 751 | 4:49.7 | -69:17 | 7X | 6 | 77 | 74 | 35 | 1L | 35 | .16 | 79 | | | 77A-E | 107.7 | 1.37 | | | | | |
| 125 | 719 | 755 | 4:49.7 | -69:17 | 7X | 6 | 193 | 189 | 57 | 3L | 19 | .16 | 43 | | | 77A-E | 107.7 | 2.51 | | | | | |
| 129 | 719 | 755 | 4:49.7 | -69:17 | 7X | 6 | 89 | 69 | 215 | 10C | 22 | .16 | 40 | | | 77A-E | 107.7 | 2.70 | | | | | |
| 130 | 719 | 752 | 4:49.7 | -69:17 | 7X | 6 | 257 | 177 | 791 | 30C | 26 | .16 | 49 | | | 77A-E | 107.7 | 2.19 | | | | | |
| 130 | 792 | 768 | 4:49.7 | -67:44 | 10X | 13 | 259 | 101 | 7252 | 30C | 242 | .05 | 293 | | | | | | | | | | |
| 124 | 791 | 771 | 4:50.0 | -67:46 | 10X | 8 | 74 | 71 | 65 | 1L | 65 | .10 | 109 | (SA0249120) | | 3 | 52.5 | 0.48 | | | | | |
| 125 | 792 | 772 | 4:50.0 | -67:46 | 10X | 8 | 187 | 178 | 256 | 3L | 85 | .10 | 143 | (SA0249120) | | 3 | 52.5 | 0.37 | | | | | |
| | | | | | | | | | | | | | | | | | | | | 249120? | 7.8 | A2 | |

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| FR. | X | Y | P.A. | DEC. | *X*Y | P | BQ | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|-------|---------|-----------|------|-----|------|------|------|-------------|------|-----|--------|-------|------|---------|---------|-------|----|
| 129 | 790 | 769 | 4:50.0 | -67:46 | 10X 8 | 66* 56 | 590 10C | 59 | 10C | 59 | .10 | 87 | (SA0249120) | | | 3 | 52.5 | 0.60 | | | | |
| 130 | 790 | 767 | 4:50.0 | -67:46 | 10X 8 | 178*139 | 1667 30C | 56 | 10C | 56 | .10 | 82 | (SA0249120) | | | 3 | 52.5 | 0.64 | | | | |
| 125 | 731 | 757 | 4:50.2 | -69:06 | 4X 3 | 192 185 | 35 3L | 12 | 16 | 12 | .16 | 26 | -- | | | | | | | | 1698? | |
| 129 | 728 | 755 | 4:50.2 | -69:06 | 4X 3 | 63 51 | 73 10C | 7 | 16 | 7 | .16 | 14 | -- | | | | | | | | 1698? | |
| 130 | 728 | 753 | 4:50.2 | -59:06 | 4X 4 | 155 126 | 289 30C | 10 | 16 | 10 | .16 | 18 | -- | | | | | | | | 1698? | |
| 124 | 694 | 748 | 4:50.4 | -69:50 | 2X 2 | 78 72 | 22 1L | 22 | 16 | 22 | .16 | 50 | -- | | | | | | | | 1704? | |
| 125 | 695 | 747 | 4:50.4 | -69:50 | 3X 4 | 199 184 | 110 3L | 37 | 16 | 37 | .16 | 83 | -- | | | | | | | | 1704? | |
| 129 | 694 | 747 | 4:50.4 | -69:50 | 6X 4 | 80 53 | 304 10C | 30 | 16 | 30 | .16 | 56 | -- | | | | | | | | 1704? | |
| 130 | 694 | 745 | 4:50.4 | -69:50 | 7X 7 | 201 127 | 1460 30C | 49 | 16 | 49 | .16 | 90 | -- | | | | | | | | 1704? | |
| 124 | 710 | 746 | 4:51.1 | -69:30 | 13X17 | 94 76 | 1001 1L | 1001 | 17 | 1001 | .17 | 2360 | (LH1) | | | 79.A-E | 395.7 | 0.17 | 1712.22 | | | |
| 125 | 712 | 747 | 4:51.1 | -69:30 | 13X17 | 262 194 | 3762 3L | 1254 | 17 | 1254 | .17 | 2960 | (LH1) | | | 79.A-E | 395.7 | 0.13 | 1712.22 | | | |
| 129 | 711 | 746 | 4:51.1 | -69:30 | 13X17 | 199 76 | 5819 10C | 582 | 17 | 582 | .17 | 1120 | (LH1) | | | 79A-E | 395.7 | 0.35 | 1712.22 | | | |
| 130 | 711 | 744 | 4:51.1 | -69:30 | 13X17 | 652 201 | 21388 30C | 713 | 17 | 713 | .17 | 1370 | (LH1) | | | 79.A-E | 395.7 | 0.29 | 1712.22 | | | |
| 124 | 710 | 746 | 4:51.1 | -69:25 | 4X 8 | 94 86 | 88 1L | 88 | 17* | 88 | .17* | 208 | LH1 | 3.0 | 7.5 | 23 | (79) | | 1712.22 | | | |
| 125 | 713 | 747 | 4:51.1 | -69:25 | 4X 8 | 252*228 | 265 3L | 88 | 17* | 88 | .17* | 208 | LH1 | 3.0 | 7.5 | 23 | (79) | | 1712.22 | | | |
| 129 | 711 | 746 | 4:51.1 | -69:25 | 4X 8 | 199 125 | 667 10C | 67 | 17* | 67 | .17* | 128 | LH1 | 3.0 | 7.5 | 23 | (79) | | 1712.22 | | | |
| 130 | 712 | 745 | 4:51.1 | -69:25 | 4X 8 | 490*405 | 1618 30C | 54 | 17* | 54 | .17* | 103 | LH1 | 3.0 | 7.5 | 23 | (79) | | 1712.22 | | | |
| 124 | 683 | 741 | 4:51.2 | -70:04 | 5X 6 | 83 73 | 94 1L | 94 | 16 | 94 | .16 | 211 | -- | | | | | | 1711 | | | |
| 125 | 685 | 743 | 4:51.2 | -70:04 | 6X 6 | 212 181 | 482 3L | 161 | 16 | 161 | .16 | 362 | -- | | | | | | 1711 | | | |
| 129 | 684 | 742 | 4:51.2 | -70:04 | 8X 7 | 112 49 | 1071 10C | 107 | 16 | 107 | .16 | 198 | -- | | | | | | 1711 | | | |
| 130 | 684 | 740 | 4:51.2 | -70:04 | 12X 9 | 327 114 | 7200 30C | 240 | 16 | 240 | .16 | 444 | -- | | | | | | 1711 | | | |
| 125 | 803 | 764 | 4:51.3 | -67:32 | 2X 2 | 183 172 | 38 3L | 13 | 11 | 13 | .11 | 22 | -- | | | | | | -- | | | |
| 129 | 803 | 766 | 4:51.3 | -67:32 | 2X 2 | 54 45 | 34 10C | 3 | 11 | 3 | .11 | 5 | -- | | | | | | -- | | | |
| 130 | 803 | 764 | 4:51.3 | -67:32 | 2X 2 | 126 107 | 71 30C | 2 | 11 | 2 | .11 | 4 | -- | | | | | | -- | | | |
| 124 | 714 | 741 | 4:52.4 | -69:21 | 5X 4 | 91 87 | 31 1L | 31 | 18 | 31 | .18 | 77 | LH2 | 3.0 | 2.0 | 10 | (79) | | | | 1727 | |

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| FP. | X | Y | P.A. | DEC. | *X*Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | H1 | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|------|---------|------|-----|-----|-----|-----|-----|--------|------|-----|-------|--------|------|---------|---------|---|----|
| 125 | 717 | 742 | 4:52.4 | -69:21 | 5X 4 | 241*230 | 77 | 3L | 26 | .18 | 64 | 64 | LH2 | 3.0 | 2.0 | 10 | (79) | | 1727 | | | |
| 129 | 715 | 742 | 4:52.4 | -69:21 | 5X 4 | 180 136 | 273 | 10C | 27 | .18 | 55 | 55 | LH2 | 3.0 | 2.0 | 10 | (79) | | 1727 | | | |
| 130 | 716 | 739 | 4:52.4 | -69:21 | 5X 4 | 517*410 | 718 | 30C | 24 | .18 | 48 | 48 | LH2 | 3.0 | 2.0 | 10 | (79) | | 1727 | | | |
| 124 | 714 | 741 | 4:52.5 | -69:25 | 5X 5 | 91 86 | 55 | 1L | 55 | .18 | 136 | 136 | (LH2) | | | | 79CE | 58.0 | 0.43 | 1727 | | |
| 125 | 714 | 742 | 4:52.5 | -69:25 | 5X 5 | 245*236 | 109 | 3L | 36 | .18 | 89 | 89 | (LH2) | | | | 79CE | 58.0 | 0.65 | 1727 | | |
| 129 | 715 | 742 | 4:52.5 | -69:25 | 5X 5 | 180 129 | 390 | 10C | 39 | .18 | 78 | 78 | (LH2) | | | | 79CE | 58.0 | 0.74 | 1727 | | |
| 130 | 713 | 739 | 4:52.5 | -69:25 | 4X 5 | 520*477 | 703 | 30C | 23* | .18 | 47 | 47 | (LH2) | | | | 79CE | 58.0 | 1.24 | 1727 | | |
| 124 | 840 | 767 | 4:52.5 | -66:47 | 2X 3 | 74 70 | 23 | 1L | 23 | .12 | 43 | 43 | -- | | | | (4.6) | | 1714? | | | |
| 125 | 842 | 767 | 4:52.5 | -66:47 | 2X 6 | 198 184 | 103 | 3L | 34 | .12 | 64 | 64 | -- | | | | (4.6) | | 1714? | | | |
| 129 | 840 | 770 | 4:52.5 | -66:47 | 5X 3 | 64 53 | 113 | 10C | 11 | .12 | 18 | 18 | -- | | | | (4.6) | | 1714? | | | |
| 130 | 840 | 768 | 4:52.5 | -66:47 | 8X 6 | 163 123 | 1000 | 30C | 33 | .12 | 53 | 53 | -- | | | | (4.6) | | 1714? | | | |
| 124 | 813 | 762 | 4:52.6 | -67:22 | 5X 5 | 71* 70 | 20 | 1L | 20 | .12 | 37 | 37 | (LH3) | | | | 5 | 35.2 | 0.95 | | | |
| 125 | 813 | 761 | 4:52.6 | -67:22 | 5X 5 | 187*183 | 51 | 3L | 17 | .12 | 32 | 32 | (LH3) | | | | 5 | 35.2 | 1.10 | | | |
| 129 | 814 | 762 | 4:52.6 | -67:22 | 5X 5 | 73 63 | 81 | 10C | 8 | .12 | 13 | 13 | (LH3) | | | | 5 | 35.2 | 2.72 | | | |
| 130 | 814 | 760 | 4:52.6 | -67:22 | 5X 5 | 192 159 | 275 | 30C | 9 | .12 | 15 | 15 | (LH3) | | | | 5 | 35.2 | 2.41 | | | |
| 129 | 849 | 773 | 4:52.6 | -66:36 | 2X 2 | 56 47 | 36 | 10C | 4 | .10 | 5 | 5 | | | | | (6.11) | | | | | |
| 130 | 849 | 769 | 4:52.6 | -66:36 | 2X 2 | 122 109 | 48 | 30C | 2 | .13 | 3 | 3 | | | | | (6.11) | | | | | |
| 124 | 813 | 762 | 4:52.7 | -67:18 | 6X 6 | 71* 70 | 37 | 1L | 37 | .12 | 69 | 69 | LH3 | 5.0 | 5.0 | 7 | (5) | | | | | |
| 125 | 815 | 761 | 4:52.7 | -67:18 | 6X 6 | 189*183 | 113 | 3L | 38 | .12 | 71 | 71 | LH3 | 5.0 | 5.0 | 7 | (5) | | | | | |
| 129 | 814 | 762 | 4:52.7 | -67:18 | 6X 6 | 73 61 | 128 | 10C | 13 | .12 | 20 | 20 | LH3 | 5.0 | 5.0 | 7 | (5) | | | | | |
| 130 | 815 | 759 | 4:52.7 | -67:18 | 6X 6 | 176*156 | 332 | 30C | 11 | .12 | 18 | 18 | LH3 | 5.0 | 5.0 | 7 | (5) | | | | | |
| 124 | 669 | 730 | 4:53.0 | -70:24 | 4X 4 | 77 73 | 30 | 1L | 30 | .15 | 65 | 65 | | | | | | | -- | | | |
| 125 | 670 | 731 | 4:53.0 | -70:24 | 6X 2 | 193 179 | 138 | 3L | 46 | .15 | 99 | 99 | | | | | | | -- | | | |
| 129 | 670 | 730 | 4:53.0 | -70:24 | 4X 4 | 62 49 | 122 | 10C | 12 | .15 | 22 | 22 | | | | | | | -- | | | |
| 130 | 670 | 728 | 4:53.0 | -70:24 | 5X 5 | 159 116 | 543 | 30C | 18 | .15 | 32 | 32 | | | | | | | -- | | | |

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| FP. | X | Y | R.A. | DEC. | *X* | *Y | P | BG | V | E.F | V/E | RE | UF | LH | NO. | SIZE | BS | N | NO. | HA | HI | NGC | NO. | SAO | NO. | M | SP |
|-----|-----|-----|--------|--------|-----|----|------|-----|------|-----|-----|------|-----|-------|-----|------|-----|------|-----|------|-------|-------|-----|-----|-----|---|----|
| 124 | 719 | 739 | 4:53.1 | -69:18 | 3X | 3 | 83* | 81 | 6 | 1L | 6 | .25 | 21 | | | | | 81AB | | 11.6 | 0.55* | | | | | | |
| 125 | 718 | 740 | 4:53.1 | -69:18 | 3X | 3 | 223* | 223 | -3 | 3L | -1 | .25 | -- | | | | | 81AB | | 11.6 | -- | | | | | | |
| 129 | 720 | 739 | 4:53.1 | -69:18 | 3X | 3 | 101* | 99 | 14 | 10C | 1 | .25 | 4 | | | | | 81AB | | 11.6 | 3.19 | | | | | | |
| 130 | 720 | 737 | 4:53.1 | -69:18 | 3X | 3 | 279* | 272 | 25 | 30C | 1 | .25 | 2 | | | | | 81AB | | 11.6 | 5.35 | | | | | | |
| 124 | 778 | 751 | 4:53.1 | -68:08 | 4X | 3 | 78 | 76 | 13 | 1L | 13 | .09 | 21 | | | | | 8.A | | 23.1 | 1.10 | | | | | | |
| 125 | 777 | 754 | 4:53.1 | -68:08 | 4X | 3 | 189 | 184 | 30 | 3L | 10 | .09 | 16 | | | | | 8.A | | 23.1 | 1.45 | | | | | | |
| 129 | 778 | 752 | 4:53.1 | -68:08 | 4X | 3 | 87 | 73 | 63 | 10C | 6 | .09 | 9 | | | | | 8.A | | 23.1 | 2.60 | | | | | | |
| 130 | 778 | 750 | 4:53.1 | -68:08 | 4X | 3 | 226 | 189 | 167 | 30C | 6 | .09 | 8 | | | | | 8.A | | 23.1 | 2.93 | | | | | | |
| 124 | 832 | 762 | 4:53.2 | -66:59 | 5X | 6 | 85 | 79 | 61 | 1L | 61 | .16 | 137 | (LH4) | | | | 4A-F | | 31.0 | 0.24 | 1731 | | | | | |
| 125 | 832 | 763 | 4:53.2 | -66:59 | 5X | 6 | 218 | 205 | 116 | 3L | 39 | .16 | 88 | (LH4) | | | | 4A-F | | 31.0 | 0.35 | 1731 | | | | | |
| 129 | 832 | 763 | 4:53.2 | -66:59 | 5X | 6 | 145 | 105 | 324 | 10C | 32 | .16 | 60 | (LH4) | | | | 4A-F | | 31.0 | 0.52 | 1731 | | | | | |
| 130 | 832 | 761 | 4:53.2 | -66:59 | 5X | 6 | 470 | 306 | 1475 | 30C | 49 | .16 | 91 | (LH4) | | | | 4A-F | | 31.0 | 0.34 | 1731 | | | | | |
| 124 | 843 | 763 | 4:53.2 | -66:40 | 3X | 3 | 76 | 72 | 19 | 1L | 19 | .13 | 37 | | | | | (6) | | | | | | | | | |
| 125 | 847 | 766 | 4:53.2 | -66:40 | 9X | 8 | 215* | 188 | 931 | 3L | 310 | .13 | 605 | | | | | (6) | | | | | | | | | |
| 124 | 737 | 741 | 4:53.3 | -68:56 | 2X | 3 | 77 | 71 | 30 | 1L | 30 | .25 | 104 | -- | | | | | | | | 1734? | | | | | |
| 125 | 737 | 744 | 4:53.3 | -68:56 | 4X | 5 | 190 | 182 | 95 | 3L | 32 | .25 | 110 | -- | | | | | | | | 1734? | | | | | |
| 129 | 739 | 742 | 4:53.3 | -68:56 | 14X | 7 | 67 | 50 | 887 | 10C | 89 | .25 | 231 | -- | | | | | | | | 1734? | | | | | |
| 130 | 739 | 741 | 4:53.3 | -68:56 | 16X | 17 | 178 | 116 | 5197 | 30C | 173 | .25 | 450 | -- | | | | | | | | 1734? | | | | | |
| 124 | 832 | 762 | 4:53.4 | -66:56 | 5X | 5 | 85 | 79 | 55 | 1L | 55 | .16* | 124 | LH4 | | 4.0 | 4.0 | 23 | (4) | | | 1731 | | | | | |
| 125 | 833 | 763 | 4:53.4 | -66:56 | 5X | 5 | 218 | 208 | 73 | 3L | 24 | .16* | 55 | LH4 | | 4.0 | 4.0 | 23 | (4) | | | 1731 | | | | | |
| 129 | 832 | 763 | 4:53.4 | -66:56 | 5X | 5 | 145 | 108 | 265 | 10C | 27 | .16* | 49 | LH4 | | 4.0 | 4.0 | 23 | (4) | | | 1731 | | | | | |
| 130 | 833 | 760 | 4:53.4 | -66:56 | 5X | 5 | 412* | 317 | 755 | 30C | 25 | .16* | 47 | LH4 | | 4.0 | 4.0 | 23 | (4) | | | 1731 | | | | | |
| 124 | 807 | 756 | 4:53.5 | -67:28 | 3X | 3 | 71* | 70 | 9 | 1L | 9 | .11 | 16 | | | | | 7 | | 3.2 | 0.20* | | | | | | |
| 125 | 808 | 757 | 4:53.5 | -67:28 | 3X | 3 | 174* | 174 | 3 | 3L | 1 | .11 | 2 | | | | | 7 | | 3.2 | 1.81* | | | | | | |
| 129 | 808 | 757 | 4:53.5 | -67:28 | 3X | 3 | 46* | 47 | -1 | 10C | 0 | .11 | -- | | | | | 7 | | 3.2 | -- | | | | | | |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | MA | HI | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|----|----|-----|-----|------|-----|-----|------|-----|--------|------|-----|-------|--------|-------|---------|---------|---------|----|
| 130 | 808 | 755 | 4:53.5 | -67:28 | 3X | 3 | 113 | 113 | 4 | 30C | 0 | .11 | 0 | | | | 7 | 3.2 | 16.0* | | | | |
| 129 | 757 | 744 | 4:54.0 | -68:34 | 2X | 2 | 57 | 50 | 20 | 10C | 2 | .20 | 4 | | | | (80) | | | | | | |
| 130 | 757 | 741 | 4:54.0 | -68:34 | 2X | 2 | 136 | 120 | 56 | 30C | 2 | .20 | 4 | | | | (80) | | | | | | |
| 124 | 660 | 727 | 4:54.1 | -70:40 | 3X | 3 | 75 | 73 | 19 | 1L | 19 | .14 | 39 | -- | | | | | | | | 1754? | |
| 125 | 660 | 725 | 4:54.1 | -70:40 | 5X | 4 | 201 | 182 | 236 | 3L | 79 | .14 | 162 | -- | | | | | | | | 1754? | |
| 129 | 658 | 725 | 4:54.1 | -70:40 | 3X | 4 | 68 | 45 | 184 | 10C | 18 | .14 | 31 | -- | | | | | | | | 1754? | |
| 130 | 658 | 722 | 4:54.1 | -70:40 | 6X | 7 | 178 | 105 | 1070 | 30C | 36 | .14 | 61 | -- | | | | | | | | 1754? | |
| 124 | 686 | 726 | 4:54.2 | -70:05 | 8X | 8 | 78 | 73 | 73 | 1L | 73 | .16 | 164 | | | | 185 | 60.6 | 0.37 | | | | |
| 125 | 686 | 727 | 4:54.2 | -70:05 | 8X | 8 | 198 | 187 | 213 | 3L | 71 | .16 | 160 | | | | 185 | 60.6 | 0.38 | | | | |
| 129 | 686 | 727 | 4:54.2 | -70:05 | 8X | 8 | 87 | 59 | 403 | 10C | 40 | .16 | 75 | | | | 185 | 60.6 | 0.81 | | | | |
| 130 | 686 | 725 | 4:54.2 | -70:05 | 8X | 8 | 236 | 144 | 1115 | 30C | 37 | .16 | 69 | | | | 185 | 60.6 | 0.88 | | | | |
| 124 | 723 | 734 | 4:54.3 | -69:13 | 5X | 7 | 88 | 82 | 74 | 1L | 74 | .26* | 268 | LH5 | 4.0 | 6.0 | 26 | | | | | 1727-48 | |
| 125 | 725 | 736 | 4:54.3 | -69:13 | 5X | 7 | 243 | 213 | 382 | 3L | 127 | .26* | 460 | LH5 | 4.0 | 6.0 | 26 | | | | | 1727-48 | |
| 129 | 724 | 734 | 4:54.3 | -69:13 | 5X | 7 | 171 | 106 | 566 | 10C | 57 | .26* | 154 | LH5 | 4.0 | 6.0 | 26 | | | | | 1727-48 | |
| 130 | 725 | 733 | 4:54.3 | -69:13 | 5X | 7 | 430 | 307 | 1135 | 30C | 38 | .26* | 103 | LH5 | 4.0 | 6.0 | 26 | | | | | 1727-48 | |
| 124 | 764 | 740 | 4:54.3 | -68:27 | 3X | 3 | 76 | 75 | 8 | 1L | 8 | .20 | 22 | | | | 80 | 9.2 | 0.42* | | | | |
| 125 | 763 | 743 | 4:54.3 | -68:27 | 3X | 3 | 196 | 191 | 19 | 3L | 6 | .20 | 17 | | | | 80 | 9.2 | 0.53 | | | | |
| 129 | 763 | 741 | 4:54.3 | -68:27 | 3X | 3 | 76 | 68 | 33 | 10C | 3 | .20 | 7 | | | | 80 | 9.2 | 1.30 | | | | |
| 130 | 763 | 739 | 4:54.3 | -68:27 | 3X | 3 | 193 | 172 | 77 | 30C | 3 | .20 | 6 | | | | 80 | 9.2 | 1.64 | | | | |
| 124 | 758 | 741 | 4:54.4 | -68:35 | 2X | 2 | 77 | 73 | 13 | 1L | 13 | .20 | 36 | | | | | | | | | -- | |
| 125 | 757 | 742 | 4:54.4 | -68:35 | 2X | 2 | 187 | 181 | 24 | 3L | 8 | .20 | 22 | | | | | | | | | -- | |
| 124 | 723 | 734 | 4:54.5 | -69:16 | 5X | 7 | 88 | 81 | 104 | 1L | 104 | .26 | 378 | (LH5) | | | | 83.A-D | 150.8 | 0.40 | 1727-48 | | |
| 125 | 725 | 735 | 4:54.5 | -69:16 | 6X | 7 | 248 | 215 | 389 | 3L | 130 | .26 | 471 | (LH5) | | | | 83.A-D | 150.8 | 0.32 | 1727-48 | | |
| 129 | 724 | 734 | 4:54.5 | -69:16 | 6X | 7 | 171 | 102 | 774 | 10C | 77 | .26 | 210 | (LH5) | | | | 83.A-D | 150.8 | 0.72 | 1727-48 | | |
| 130 | 724 | 732 | 4:54.5 | -69:16 | 6X | 7 | 585 | 294 | 3221 | 30C | 107 | .26 | 291 | (LH5) | | | | 83.A-D | 150.8 | 0.52 | 1727-48 | | |

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| NO | X | Y | R.A. | DEC. | *X*Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|-------|--------|------|---------|----|------|-----|-----|------|-----|--------|---------|----|-------|------|--------------|---------|---------|---|----|
| 124 | 708 | 731 | +54.7 | -69:35 | 2X 2 | 77* 77 | | 0 | 1L | 0 | .16 | -- | -- | -- | -- | 87 | 0.6 | -- | | | | |
| 125 | 708 | 732 | +54.7 | -69:35 | 2X 2 | 195*195 | | 1 | 3L | 0 | .16 | 1 | | | | 87 | 0.6 | 0.80* | | | | |
| 126 | 707 | 730 | +54.7 | -69:35 | 2X 2 | 77* 78 | | 1 | 10C | 0 | .16 | 0 | | | | 87 | 0.6 | 3.25* | | | | |
| 130 | 707 | 728 | +54.7 | -69:35 | 2X 2 | 199*202 | | -3 | 30C | 0 | .16 | -- | -- | -- | -- | 87 | 0.6 | -- | | | | |
| 124 | 675 | 722 | +55.0 | -70:18 | 2X 2 | 77 73 | | 14 | 1L | 14 | .15 | 30 | -- | -- | -- | | | | | 1766? | | |
| 128 | 677 | 719 | +55.0 | -70:18 | 3X 2 | 201 189 | | 40 | 3L | 13 | .15 | 29 | -- | -- | -- | | | | | 1766? | | |
| 129 | 677 | 723 | +55.0 | -70:18 | 2X 2 | 59 53 | | 24 | 10C | 2 | .15 | 4 | -- | -- | -- | | | | | 1766? | | |
| 130 | 677 | 721 | +55.0 | -70:18 | 2X 3 | 148 128 | | 77 | 30C | 3 | .15 | 5 | -- | -- | -- | | | | | 1766? | | |
| 124 | 711 | 728 | +55.1 | -69:29 | 2X 3 | 80* 81 | | 5 | 1L | 5 | .16 | 11 | (LH8) | | | 88 | 0.7 | 0.06*1767-82 | | | | |
| 125 | 712 | 729 | +55.1 | -69:29 | 2X 3 | 220*220 | | 23 | 3L | 8 | .16 | 17 | (LH8) | | | 88 | 0.7 | 0.04 1767-82 | | | | |
| 129 | 711 | 728 | +55.1 | -69:29 | 2X 3 | 102*108 | | 15 | 10C | 2 | .16 | 3 | (LH8) | | | 88 | 0.7 | 0.24 1767-82 | | | | |
| 130 | 711 | 726 | +55.1 | -69:29 | 2X 3 | 275*307 | | 21 | 30C | 1 | .16 | 1 | (LH8) | | | 88 | 0.7 | 0.54 1767-82 | | | | |
| 124 | 821 | 751 | +55.1 | -67:11 | 5X 6 | 85 79 | | 59 | 1L | 59 | .12* | 110 | LH6 | 3.0 5.0 | 10 | (9) | | | | 1735.47 | | |
| 125 | 822 | 751 | +55.1 | -67:11 | 5X 6 | 228 212 | | 222 | 3L | 74 | .12* | 138 | LH6 | 3.0 5.0 | 10 | (9) | | | | 1735.47 | | |
| 129 | 821 | 751 | +55.1 | -67:11 | 5X 6 | 143 107 | | 339 | 10C | 34 | .12* | 54 | LH6 | 3.0 5.0 | 10 | (9) | | | | 1735.47 | | |
| 130 | 822 | 749 | +55.1 | -67:11 | 5X 6 | 443*308 | | 1062 | 30C | 35 | .12* | 56 | LH6 | 3.0 5.0 | 10 | (9) | | | | 1735.47 | | |
| 124 | 821 | 751 | +55.2 | -67:13 | 9X 8 | 85 77 | | 135 | 1L | 135 | .12 | 251 | (LH6) | | | 9 | 81.2 | 0.32 1735.47 | | | | |
| 125 | 822 | 752 | +55.2 | -67:13 | 9X 8 | 228 199 | | 757 | 3L | 252 | .12 | 468 | (LH6) | | | 9 | 81.2 | 0.17 1735.47 | | | | |
| 129 | 821 | 751 | +55.2 | -67:13 | 9X 8 | 143 86 | | 1154 | 10C | 115 | .12 | 183 | (LH6) | | | 9 | 81.2 | 0.44 1735.47 | | | | |
| 130 | 821 | 749 | +55.2 | -67:13 | 9X 8 | 473 229 | | 4685 | 30C | 156 | .12 | 248 | (LH6) | | | 9 | 81.2 | 0.33 1735.47 | | | | |
| 124 | 670 | 720 | +55.3 | -70:26 | 3X 3 | 78 73 | | 37 | 1L | 37 | .15 | 80 | -- | -- | -- | | | | | 1754? | | |
| 125 | 671 | 722 | +55.3 | -70:26 | 4X 4 | 199 184 | | 147 | 3L | 49 | .15 | 105 | -- | -- | -- | | | | | 1754? | | |
| 129 | 670 | 721 | +55.3 | -70:26 | 3X 3 | 66 51 | | 86 | 10C | 9 | .15 | 15 | -- | -- | -- | | | | | 1754? | | |
| 130 | 670 | 719 | +55.3 | -70:26 | 4X 6 | 163 123 | | 503 | 30C | 17 | .15 | 30 | -- | -- | -- | | | | | 1754? | | |
| 124 | 705 | 723 | +55.4 | -69:45 | 3X 5 | 83 79 | | 50 | 1L | 50 | .16 | 112 | -- | -- | -- | | | | | (88) | | |

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| FR. | X | Y | P.A. | DEC. | *X | *Y | P | BQ | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|-------|-----|------|------|------|-----|------|-----|------|--------|------|----|---------|------|-------|---------|---------|---|----|
| 125 | 703 | 725 | 4:55.4 | -69:45 | 6X | 4 | 216 | 197 | 225 | 3L | 75 | .16 | 169 | | | | (88) | | | | | | |
| 129 | 704 | 725 | 4:55.4 | -69:44 | 4X | 4 | 101 | 81 | 229 | 10C | 23 | .16 | 42 | | | | (88) | | | | | | |
| 130 | 704 | 723 | 4:55.4 | -69:44 | 6X12 | 300 | 213 | 2400 | 30C | | 80 | .16 | 148 | | | | (88) | | | | | | |
| 124 | 714 | 723 | 4:55.4 | -69:28 | 11X11 | 95 | 80 | 964 | 1L | | 964 | .16 | 2170 | (LH8) | | | (88.89) | | | | 1767-82 | | |
| 125 | 714 | 725 | 4:55.4 | -69:28 | 14X15 | 269 | 204 | 4545 | 3L | | 1515 | .16 | 3410 | (LH8) | | | (88.89) | | | | 1767-82 | | |
| 129 | 713 | 725 | 4:55.4 | -69:28 | 6X14 | 201 | 186 | 3400 | 10C | | 340 | .16 | 630 | (LH8) | | | (88.89) | | | | 1767-82 | | |
| 130 | 713 | 723 | 4:55.4 | -69:28 | 7X14 | 630 | 310 | 9400 | 30C | | 313* | .16 | 579 | (LH8) | | | (88.89) | | | | 1767-82 | | |
| 124 | 772 | 740 | 4:55.5 | -68:15 | 5X | 4 | 76 | 70 | 54 | 1L | 54 | .17 | 127 | -- | | | | | | | 1755 | | |
| 125 | 773 | 739 | 4:55.5 | -68:15 | 5X | 6 | 190 | 176 | 177 | 3L | 59 | .17 | 139 | -- | | | | | | | 1755 | | |
| 129 | 772 | 740 | 4:55.5 | -68:15 | 5X | 5 | 75 | 48 | 333 | 10C | 33 | .17 | 64 | -- | | | | | | | 1755 | | |
| 130 | 772 | 737 | 4:55.5 | -68:15 | 6X | 7 | 195 | 113 | 1238 | 30C | 41 | .17 | 79 | -- | | | | | | | 1755 | | |
| 124 | 650 | 714 | 4:55.6 | -70:56 | 3X | 3 | 76 | 72 | 19 | 1L | 19 | .13 | 37 | | | | | | | | -- | | |
| 125 | 649 | 716 | 4:55.6 | -70:56 | 3X | 3 | 196 | 180 | 101 | 3L | 34 | .13 | 66 | | | | | | | | -- | | |
| 129 | 644 | 717 | 4:55.6 | -70:56 | 3X | 3 | 59 | 44 | 88 | 10C | 9 | .13 | 15 | | | | | | | | -- | | |
| 130 | 645 | 713 | 4:55.6 | -70:56 | 4X | 6 | 148 | 105 | 580 | 30C | 19 | .13 | 32 | | | | | | | | -- | | |
| 129 | 881 | 761 | 4:55.6 | -66:00 | 2X | 2 | 53 | 43 | 39 | 10C | 4 | .10 | 6 | | | | | | | | -- | | |
| 130 | 881 | 759 | 4:55.6 | -66:00 | 3X | 3 | 126 | 101 | 154 | 30C | 5 | .10 | 8 | | | | | | | | -- | | |
| 124 | 718 | 728 | 4:55.7 | -69:21 | 2X | 2 | 83* | 82 | 4 | 1L | 4 | .20 | 11 | (LH8) | | | 90 | 1.5 | 0.1* | | 1767-82 | | |
| 125 | 723 | 727 | 4:55.7 | -69:21 | 2X | 2 | 228 | 224 | 7 | 3L | 2 | .20 | 5 | (LH8) | | | 90 | 1.5 | 0.27* | | 1767-82 | | |
| 129 | 719 | 729 | 4:55.7 | -69:21 | 2X | 2 | 109 | 108 | -1 | 10C | 0 | .20 | -- | (LH8) | | | 90 | 1.5 | -- | | 1767-82 | | |
| 130 | 722 | 726 | 4:55.7 | -69:21 | 2X | 2 | 314* | 288 | -51 | 30C | -2 | .20 | -- | (LH8) | | | 90 | 1.5 | -- | | 1767-82 | | |
| 124 | 759 | 735 | 4:55.7 | -68:31 | 4X | 4 | 72* | 73 | 12 | 1L | 12 | .26 | 44 | | | | 84 | 10.8 | 0.25 | | | | |
| 125 | 760 | 735 | 4:55.7 | -68:31 | 4X | 4 | 190* | 186 | 36 | 3L | 12 | .26 | 44 | | | | 84 | 10.8 | 0.25 | | | | |
| 129 | 759 | 735 | 4:55.7 | -68:31 | 4X | 4 | 54* | 54 | 13 | 10C | 1 | .26 | 4 | | | | 64 | 10.8 | 3.07 | | | | |
| 130 | 759 | 733 | 4:55.7 | -68:31 | 4X | 4 | 126* | 128 | 37 | 30C | 1 | .26 | 3 | | | | 84 | 10.8 | 3.24 | | | | |

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| FP. | X | Y | P.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | MI | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|-------|---------|-------|-----|----------|-----|-----|------|----------------|--------|------|----|--------|-------|------|---------|---------|---|----|
| 124 | 750 | 733 | 4:55.9 | -68:43 | 5X 5 | 75* 74 | 25 | 1L | 25 | 26 | | 91 | | | | | 85.86 | 19.6 | 0.22 | | | | |
| 125 | 752 | 734 | 4:55.9 | -68:43 | 5X 5 | 186*184 | 61 | 3L | 20 | 26 | | 74 | | | | | 85.86 | 19.6 | 0.27 | | | | |
| 129 | 750 | 733 | 4:55.9 | -68:43 | 5X 5 | 62* 58 | 40 | 10C | 4 | 26 | | 11 | | | | | 85.86 | 19.6 | 1.81 | | | | |
| 130 | 750 | 731 | 4:55.9 | -68:43 | 5X 5 | 155 142 | 91 | 30C | 3 | 26 | | 8 | | | | | 85.86 | 19.6 | 2.4 | | | | |
| 124 | 678 | 717 | 4:56.2 | -70:17 | 3X 2 | 76 73 | 15 | 1L | 15 | 16 | | 34 | -- | | | | | | | 1766 | | | |
| 125 | 678 | 716 | 4:56.2 | -70:17 | 2X 3 | 201 187 | 77 | 3L | 26 | 16 | | 58 | -- | | | | | | | 1766 | | | |
| 129 | 677 | 717 | 4:56.2 | -70:17 | 2X 2 | 62 53 | 27 | 10C | 3 | 16 | | 5 | -- | | | | | | | 1766 | | | |
| 130 | 677 | 715 | 4:56.2 | -70:17 | 2X 2 | 148 128 | 57 | 30C | 2 | 16 | | 4 | -- | | | | | | | 1766 | | | |
| 124 | 884 | 757 | 4:56.3 | -85:56 | 2X 2 | 71 67 | 15 | 1L | 15 | 10 | | 25 | | | | | | | | -- | | | |
| 125 | 883 | 760 | 4:56.3 | -85:56 | 2X 2 | 177 168 | 35 | 3L | 12 | 10 | | 20 | | | | | | | | -- | | | |
| 124 | 623 | 707 | 4:56.4 | -71:25 | 5X 5 | 71* 71 | 15 | 1L | 15 | 15 | | 32 | LH7 | 4.0 | 4.0 | -- | | | | | | | |
| 125 | 624 | 709 | 4:56.4 | -71:25 | 5X 5 | 177*179 | -20 | 3L | -7 | 15 | | -- | LH7 | 4.0 | 4.0 | -- | | | | | | | |
| 129 | 621 | 708 | 4:56.4 | -71:25 | 5X 5 | 47 42 | 36 | 10C | 4 | 15 | | 6 | LH7 | 4.0 | 4.0 | -- | | | | | | | |
| 130 | 622 | 705 | 4:56.4 | -71:25 | 5X 5 | 108 99 | 37 | 30C | 1 | 15 | | 2 | LH7 | 4.0 | 4.0 | -- | | | | | | | |
| 124 | 689 | 718 | 4:56.5 | -70:03 | 3X 3 | 80 73 | 45 | 1L | 45 | 16 | | 101 | | | | | (185) | | | | | | |
| 125 | 689 | 719 | 4:56.5 | -70:03 | 4X 3 | 204 187 | 116 | 3L | 39 | 16 | | 87 | | | | | (185) | | | | | | |
| 129 | 688 | 718 | 4:56.5 | -70:03 | 3X 3 | 75 58 | 103 | 10C | 10 | 16 | | 20 | | | | | (185) | | | | | | |
| 130 | 688 | 716 | 4:56.5 | -70:03 | 5X 5 | 198 141 | 633 | 30C | 21 | 16 | | 39 | | | | | (185) | | | | | | |
| 124 | 858 | 750 | 4:56.6 | -66:30 | 22X20 | 112 73 | 3437 | 1L | 3437 | 15 | | 7390 | (LH9,10,13,14) | | | | 11.A-L | 1874. | 0.25 | 1760-73 | | | |
| 125 | 859 | 751 | 4:56.6 | -66:30 | 22X20 | 342 189 | 11151 | 3L | 3717 | 15 | | 8000 | (LH9,10,13,14) | | | | 11.A-L | 1874. | 0.23 | 1760-73 | | | |
| 129 | 856 | 750 | 4:56.6 | -66:30 | 22X20 | 407 66 | 21099 | 10C | 2110 | 15 | | 3760 | (LH9,10,13,14) | | | | 11.A-L | 1874. | 0.50 | 1760-73 | | | |
| 130 | 858 | 749 | 4:56.6 | -66:30 | 22X20 | 990 168 | 73306 | 30C | 2444*,15 | | | 4350 | (LH9,10,13,14) | | | | 11.A-L | 1874. | 0.43 | 1760-73 | | | |
| 124 | 858 | 750 | 4:56.6 | -66:29 | 7X 5 | 112 101 | 125 | 1L | 125 | 15* | | 269 | LH9 | 6.0 | 4.0 | 38 | (11) | | | 1760.61 | | | |
| 125 | 857 | 750 | 4:56.6 | -66:29 | 7X 5 | 318*280 | 464 | 3L | 155 | 15* | | 333 | LH9 | 6.0 | 4.0 | 38 | (11) | | | 1760.61 | | | |
| 129 | 857 | 751 | 4:56.6 | -66:29 | 7X 5 | 407 253 | 1477 | 10C | 148 | 15* | | 263 | LH9 | 6.0 | 4.0 | 38 | (11) | | | 1760.61 | | | |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BQ | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|-------|-----|-----|-------|------|-----|--------|------|------|---------|-------|------|-------|---------|------|---------|---------|---|----|
| 130 | 858 | 749 | 4:56.6 | -66:29 | 7X | 5 | 990 | 840 | 2251 | 30C | 75.15 | 134 | | LH9 | 6.0 | 4.0 | 38 | (11) | | 1760-61 | | | |
| 124 | 860 | 749 | 4:56.6 | -66:28 | 69* | 112 | 85 | 714 | 1L | | 714 | .15 | 1535 | LH9--13 | 49.0* | 38 | (11) | | | 1760-69 | | | |
| 125 | 859 | 749 | 4:56.6 | -66:28 | 75* | 298 | 245 | 2070 | 3L | | 690 | .15 | 1483 | LH9--13 | 49.0* | 38 | (11) | | | 1760-69 | | | |
| 129 | 859 | 749 | 4:56.6 | -66:28 | 75* | 259 | 170 | 3986 | 10C | | 399 | .15 | 690 | LH9--13 | 49.0* | 38 | (11) | | | 1760-69 | | | |
| 130 | 857 | 748 | 4:56.6 | -66:28 | 79* | 840 | 513 | 11429 | 30C | | 381.15 | 579 | | LH9--14 | 50.5* | 38 | (11) | | | 1760-73 | | | |
| 124 | 860 | 751 | 4:56.6 | -66:27 | 54* | 112 | 90 | 339 | 1L | | 339 | .15 | 728 | LH9.10 | 40.0* | 38 | (11) | | | 1760-63 | | | |
| 125 | 859 | 750 | 4:56.6 | -66:27 | 50* | 333 | 268 | 934 | 3L | | 311 | .15 | 668 | LH9.10 | 40.0* | 38 | (11) | | | 1760-63 | | | |
| 129 | 859 | 751 | 4:56.6 | -66:27 | 45* | 385 | 216 | 2183 | 10C | | 218 | .15 | 389 | LH9.10 | 40.0* | 38 | (11) | | | 1760-63 | | | |
| 130 | 859 | 748 | 4:56.6 | -66:27 | 50* | 953 | 679 | 4806 | 30C | | 160.15 | 285 | | LH9.10 | 40.0* | 38 | (11) | | | 1760-63 | | | |
| 124 | 715 | 721 | 4:56.7 | -69:26 | 14X18 | 98 | 80 | 1230 | 1L | | 1230 | .16 | 2770 | LH8 | 15.0 | 20.0 | 76 | (90.94) | | 1767-82 | | | |
| 125 | 716 | 722 | 4:56.7 | -69:26 | 14X18 | 277 | 212 | 3048 | 3L | | 1016 | .16 | 2280 | LH8 | 15.0 | 20.0 | 76 | (90.94) | | 1767-82 | | | |
| 129 | 716 | 722 | 4:56.7 | -69:26 | 14X18 | 201 | 92 | 6391 | 10C | | 639 | .16 | 1182 | LH8 | 15.0 | 20.0 | 76 | (90.94) | | 1767-82 | | | |
| 130 | 716 | 720 | 4:56.7 | -69:26 | 14X18 | 679 | 269 | 23026 | 30C | | 768.16 | 1420 | | LH8 | 15.0 | 20.0 | 76 | (90.94) | | 1767-82 | | | |
| 124 | 861 | 752 | 4:56.7 | -66:24 | 5X | 5 | 94 | 92 | 20 | 1L | 20 | .15 | 43 | LH10 | 4.0 | 4.0 | -- | (11) | | 1763 | | | |
| 125 | 861 | 751 | 4:56.7 | -66:24 | 5X | 5 | 312 | 286 | 166 | 3L | 55 | .15 | 118 | LH10 | 4.0 | 4.0 | -- | (11) | | 1763 | | | |
| 129 | 861 | 751 | 4:56.7 | -66:24 | 5X | 5 | 238 | 212 | 144 | 10C | 14 | .15 | 26 | LH10 | 4.0 | 4.0 | -- | (11) | | 1763 | | | |
| 130 | 862 | 749 | 4:56.7 | -66:24 | 5X | 5 | 734 | 579 | 1214 | 30C | 41.15 | 72 | | LH10 | 4.0 | 4.0 | -- | (11) | | 1763 | | | |
| 124 | 710 | 719 | 4:57.0 | -69:33 | 5X | 5 | 88 | 86 | 40 | 1L | 40 | .16 | 90 | (LH8) | | | | 94A-C | 20.9 | 0.23 | 1767-82 | | |
| 125 | 711 | 720 | 4:57.0 | -69:33 | 5X | 5 | 228 | 223 | 105 | 3L | 35 | .16 | 79 | (LH8) | | | | 94A-C | 20.9 | 0.26 | 1767-82 | | |
| 129 | 711 | 720 | 4:57.0 | -69:33 | 5X | 5 | 134 | 128 | 53 | 10C | 5 | .16 | 10 | (LH8) | | | | 94A-C | 20.9 | 2.14 | 1767-82 | | |
| 130 | 711 | 718 | 4:57.0 | -69:33 | 5X | 5 | 454 | 417 | 269 | 30C | 9 | .16 | 17 | (LH8) | | | | 94A-C | 20.9 | 1.26 | 1767-82 | | |
| 129 | 839 | 744 | 4:57.1 | -66:54 | 4X | 3 | 68 | 57 | 93 | 10C | 9 | .16 | 17 | | | | | | | | | | |
| 130 | 840 | 743 | 4:57.1 | -66:54 | 5X | 7 | 178 | 139 | 725 | 30C | 24 | .16 | 45 | | | | | | | | | | |
| 124 | 724 | 721 | 4:57.2 | -69:18 | 2X | 3 | 77 | 78 | 2 | 1L | 2 | .20 | 5 | | | | | | | | | | |
| 125 | 724 | 723 | 4:57.2 | -69:18 | 2X | 3 | 213 | 215 | 10 | 3L | 3 | .20 | 9 | | | | | | | | | | |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | H1 | NGC NO. | SAO NO. | M | S |
|-----|-----|-----|--------|--------|----|----|------|-----|------|-----|-----|-----|------|----------|------|-----|-------|-------|-------|---------|---------|---|---|
| 129 | 724 | 721 | 4:57.2 | -69:18 | 2X | 3 | 83* | 84 | 8 | 100 | 1 | .20 | 2 | | | 93 | | 0.5 | 0.29* | | | | |
| 130 | 724 | 719 | 4:57.2 | -69:18 | 2X | 3 | 229* | 239 | 16 | 300 | 1 | .20 | 1 | | | 93 | | 0.5 | 0.44 | | | | |
| 124 | 858 | 750 | 4:57.2 | -66:30 | 6X | 7 | 112 | 99 | 204 | 11 | 204 | .15 | 438 | (LH9,13) | | | 118C | 355. | 0.81 | 1760-69 | | | |
| 125 | 858 | 748 | 4:57.2 | -66:30 | 6X | 7 | 284* | 262 | 478 | 31 | 159 | .15 | 342 | (LH9,13) | | | 118C | 355. | 1.04 | 1760-69 | | | |
| 129 | 858 | 749 | 4:57.2 | -66:30 | 6X | 7 | 271* | 229 | 1055 | 100 | 106 | .15 | 188 | (LH9,13) | | | 118C | 355. | 1.89 | 1760-69 | | | |
| 130 | 858 | 747 | 4:57.2 | -66:30 | 6X | 7 | 897* | 734 | 2502 | 300 | 73* | .15 | 130 | (LH9,13) | | | 118C | 355. | 2.73 | 1760-69 | | | |
| 124 | 746 | 725 | 4:57.3 | -68:50 | 4X | 4 | 76 | 74 | 15 | 11 | 15 | .26 | 54 | (LH11) | | | 92.AB | 14.4 | 0.27 | | | | |
| 125 | 747 | 726 | 4:57.3 | -68:50 | 4X | 4 | 198 | 193 | 32 | 31 | 11 | .26 | 40 | (LH11) | | | 92.AB | 14.4 | 0.36 | | | | |
| 129 | 745 | 725 | 4:57.3 | -68:50 | 4X | 4 | 78* | 73 | 67 | 100 | 7 | .26 | 18 | (LH11) | | | 92.AB | 14.4 | 0.79 | | | | |
| 130 | 747 | 723 | 4:57.3 | -68:50 | 4X | 4 | 239 | 199 | 230 | 300 | 8 | .26 | 21 | (LH11) | | | 92.AB | 14.4 | 0.69 | | | | |
| 124 | 746 | 725 | 4:57.3 | -68:45 | 3X | 3 | 76 | 75 | 4 | 11 | 4 | .26 | 15 | LH11 | 1.5 | 1.0 | -- | (92) | | | | | |
| 125 | 750 | 727 | 4:57.3 | -68:45 | 3X | 3 | 192* | 190 | 9 | 31 | 3 | .26 | 11 | LH11 | 1.5 | 1.0 | -- | (92) | | | | | |
| 129 | 747 | 725 | 4:57.3 | -68:45 | 3X | 3 | 86 | 78 | 30 | 100 | 3 | .26 | 8 | LH11 | 1.5 | 1.0 | -- | (92) | | | | | |
| 130 | 748 | 723 | 4:57.3 | -68:45 | 3X | 3 | 223* | 200 | 80 | 300 | 3 | .26 | 7 | LH11 | 1.5 | 1.0 | -- | (92) | | | | | |
| 124 | 649 | 709 | 4:57.4 | -70:53 | 3X | 3 | 78 | 73 | 24 | 11 | 24 | .16 | 54 | | | | | | | | | | |
| 125 | 650 | 710 | 4:57.4 | -70:53 | 4X | 3 | 198 | 182 | 113 | 31 | 38 | .16 | 85 | | | | | | | | | | |
| 129 | 650 | 709 | 4:57.4 | -70:53 | 3X | 2 | 56 | 43 | 61 | 100 | 6 | .16 | 11 | | | | | | | | | | |
| 130 | 650 | 706 | 4:57.4 | -70:53 | 7X | 5 | 144 | 110 | 678 | 300 | 23 | .16 | 42 | | | | | | | | | | |
| 125 | 697 | 713 | 4:57.4 | -69:55 | 3X | 3 | 204 | 180 | 114 | 31 | 38 | .16 | 86 | | | | | | | | | | |
| 129 | 696 | 716 | 4:57.4 | -69:55 | 4X | 6 | 78 | 62 | 188 | 100 | 19 | .16 | 35 | | | | | | | | | | |
| 130 | 696 | 714 | 4:57.4 | -69:55 | 6X | 5 | 210 | 163 | 685 | 300 | 23 | .16 | 42 | | | | | | | | | | |
| 124 | 698 | 716 | 4:57.5 | -69:51 | 3X | 3 | 80 | 76 | 24 | 11 | 24 | .16 | 54 | | | | | | | | | | |
| 125 | 698 | 717 | 4:57.5 | -69:51 | 4X | 3 | 205 | 192 | 96 | 31 | 32 | .16 | 72 | | | | | | | | | | |
| 124 | 764 | 727 | 4:57.5 | -68:29 | 7X | 8 | 96 | 79 | 253 | 11 | 253 | .26 | 918 | (LH12) | | | 91.AB | 229.5 | 0.25 | 1770 | | | |
| 125 | 765 | 728 | 4:57.5 | -68:29 | 7X | 8 | 259 | 204 | 891 | 31 | 297 | .26 | 1080 | (LH12) | | | 91.AB | 229.5 | 0.21 | 1770 | | | |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | H1 | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|----|----|---------|------|------|-----|---------|------|-----|--------|------|-----|-------|-------|----------|---------|---------|---|----|
| 129 | 763 | 728 | 4:57.5 | -68:29 | 7X | 8 | 207 | 83 | 1487 | 100 | 149 | .26 | 403 | (LH12) | | | 91,AB | 229.5 | 0.57 | 1770 | | | |
| 130 | 763 | 726 | 4:57.5 | -68:29 | 7X | 8 | 663 | 216 | 6234 | 300 | 208*.26 | | 562 | (LH12) | | | 91,AB | 229.5 | 0.41 | 1770 | | | |
| 124 | 858 | 745 | 4:57.5 | -66:28 | 5X | 5 | 88* | 88 | 15 | 1L | 15 | .15 | 32 | LH13 | 3.0 | 3.0 | -- | | | 1769 | | | |
| 125 | 860 | 746 | 4:57.5 | -66:28 | 5X | 5 | 238*235 | 59 | 3L | | 20 | .15 | 43 | LH13 | 3.0 | 3.0 | -- | | | 1769 | | | |
| 129 | 859 | 746 | 4:57.5 | -66:28 | 5X | 5 | 152*146 | -3 | 100 | | 0 | .15 | -- | LH13 | 3.0 | 3.0 | -- | | | 1769 | | | |
| 130 | 860 | 744 | 4:57.5 | -66:28 | 5X | 5 | 454*452 | -130 | 300 | | -4 | .15 | -- | LH13 | 3.0 | 3.0 | -- | | | 1769 | | | |
| 124 | 764 | 727 | 4:57.6 | -68:25 | 7X | 5 | 96 | 82 | 145 | 1L | 145 | .26* | 526 | LH12 | 6.0 | 4.0 | 25 | (91) | | 1770 | | | |
| 125 | 766 | 728 | 4:57.6 | -68:25 | 7X | 5 | 248*215 | 380 | 3L | | 127 | .26* | 461 | LH12 | 6.0 | 4.0 | 25 | (91) | | 1770 | | | |
| 129 | 763 | 728 | 4:57.6 | -68:25 | 7X | 5 | 207 | 103 | 880 | 100 | 88 | .26* | 238 | LH12 | 6.0 | 4.0 | 25 | (91) | | 1770 | | | |
| 130 | 765 | 725 | 4:57.6 | -68:25 | 7X | 5 | 523*290 | 2801 | 300 | | 93 | .26* | 253 | LH12 | 6.0 | 4.0 | 25 | (91) | | 1770 | | | |
| 124 | 841 | 741 | 4:57.7 | -66:53 | 2X | 2 | 75 | 71 | 13 | 1L | 13 | .16 | 29 | | | | -- | | | -- | | | |
| 125 | 841 | 743 | 4:57.7 | -66:53 | 2X | 2 | 190 | 178 | 41 | 3L | 14 | .16 | 31 | | | | -- | | | -- | | | |
| 124 | 812 | 735 | 4:57.8 | -67:32 | 2X | 3 | 76 | 70 | 21 | 1L | 21 | .12 | 39 | -- | | | | | 1774?86? | | | | |
| 125 | 810 | 736 | 4:57.8 | -67:32 | 3X | 3 | 195 | 182 | 78 | 3L | 26 | .12 | 48 | -- | | | | | 1774?86? | | | | |
| 129 | 810 | 732 | 4:57.8 | -67:32 | 4X | 3 | 68 | 52 | 162 | 100 | 16 | .12 | 26 | -- | | | | | 1774?86? | | | | |
| 130 | 809 | 734 | 4:57.8 | -67:32 | 9X | 7 | 174 | 133 | 2094 | 300 | 70 | .12 | 111 | -- | | | | | 1774?86? | | | | |
| 124 | 704 | 717 | 4:57.9 | -69:44 | 2X | 2 | 84 | 78 | 23 | 1L | 23 | .16 | 52 | -- | | | | | 1772?82? | | | | |
| 125 | 705 | 716 | 4:57.9 | -69:44 | 2X | 4 | 212 | 199 | 69 | 3L | 23 | .16 | 52 | -- | | | | | 1772?82? | | | | |
| 129 | 704 | 715 | 4:57.9 | -69:44 | 4X | 4 | 97 | 76 | 167 | 100 | 17 | .16 | 31 | -- | | | | | 1772?82? | | | | |
| 130 | 704 | 713 | 4:57.9 | -69:44 | 5X | 6 | 279 | 198 | 950 | 300 | 32 | .16 | 59 | -- | | | | | 1772?82? | | | | |
| 124 | 862 | 744 | 4:58.0 | -66:22 | 3X | 3 | 78* | 78 | 1 | 1L | 1 | .15 | 2 | LH14 | 1.5 | 1.0 | -- | (11) | | 1773 | | | |
| 125 | 865 | 744 | 4:58.0 | -66:22 | 3X | 3 | 181*185 | -9 | 3L | | -3 | .15 | -- | LH14 | 1.5 | 1.0 | -- | (11) | | 1773 | | | |
| 129 | 863 | 743 | 4:58.0 | -66:22 | 3X | 3 | 70* 71 | -2 | 100 | | 0 | .15 | -- | LH14 | 1.5 | 1.0 | -- | (11) | | 1773 | | | |
| 130 | 864 | 741 | 4:58.0 | -66:22 | 3X | 3 | 156*163 | -22 | 300 | | -1 | .15 | -- | LH14 | 1.5 | 1.0 | -- | (11) | | 1773 | | | |
| 129 | 778 | 727 | 4:58.1 | -68:10 | 2X | 2 | 52 | 47 | 18 | 100 | 2 | .14 | 3 | | | | -- | | | -- | | | |

NRL REPORT 8206

| FR. X | Y | R.A. | DEC. | *X *Y P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | M NO. | HA | HI | NOC NO. | SAD NO. | M | SP |
|-------|-----|------|--------|---------|----------|-----|------|-------|-----|------|--------|------------|------------|-------|------|------|---------|---------|-------|----|
| 130 | 777 | 726 | 4:58.1 | -68:10 | 2x 2 124 | 112 | 41 | 30C | 1 | 14 | 2 | | | | | | | | -- | |
| 124 | 694 | 711 | 4:58.2 | -69:55 | 2x 2 80 | 74 | 21 | 1L | 21 | 16 | 47 | | | | | | | | -- | |
| 125 | 697 | 713 | 4:58.2 | -69:55 | 3x 4 204 | 189 | 104 | 3L | 35 | 16 | 78 | | | | | | | | -- | |
| 129 | 696 | 712 | 4:58.2 | -69:55 | 3x 4 79 | 58 | 136 | 10C | 14 | 16 | 25 | | | | | | | | -- | |
| 130 | 696 | 710 | 4:58.2 | -69:55 | 6x 5 212 | 163 | 700 | 30C | 23 | 16 | 43 | | | | | | | | -- | |
| 124 | 872 | 741 | 4:58.6 | -68:16 | 6x 5 77 | 75 | 21 | 1L | 21 | 13 | 41 | | | 12.A | 26.8 | 0.65 | | | | |
| 125 | 873 | 742 | 4:58.6 | -68:16 | 6x 5 195 | 187 | 43 | 3L | 14 | 13 | 28 | | | 12.A | 26.8 | 0.96 | | | | |
| 129 | 872 | 743 | 4:58.6 | -68:16 | 6x 5 73 | 65 | 99 | 10C | 10 | 13 | 16 | | | 12.A | 26.8 | 1.64 | | | | |
| 130 | 872 | 741 | 4:58.6 | -68:16 | 6x 5 195 | 164 | 298 | 30C | 10 | 13 | 16 | | | 12.A | 26.8 | 1.57 | | | | |
| 124 | 894 | 743 | 4:58.9 | -65:44 | 13x22 | 81 | 74 | 516 | 1L | 516 | .09* | 822 | LH15 | 13.0 | 24.0 | 49 | | | 1787 | |
| 125 | 897 | 744 | 4:58.9 | -65:44 | 13x22 | 208 | 188 | 1207 | 3L | 402 | .09* | 639 | LH15 | 13.0 | 24.0 | 49 | | | 1787 | |
| 129 | 894 | 743 | 4:58.9 | -65:44 | 13x22 | 119 | 74 | 3035 | 10C | 304 | .09* | 428 | LH15 | 13.0 | 24.0 | 49 | | | 1787 | |
| 130 | 895 | 742 | 4:58.9 | -65:44 | 13x22 | 348 | 197 | 7404 | 30C | 247 | .09* | 348 | LH15 | 13.0 | 24.0 | 49 | | | 1787 | |
| 124 | 746 | 716 | 4:59.2 | -68:52 | 4x 6 81 | 73 | 96 | 1L | 96 | .20 | 263 | -- | | (92) | | | | | 1785? | |
| 125 | 746 | 717 | 4:59.2 | -68:52 | 5x 6 205 | 184 | 386 | 3L | 129 | .20 | 354 | -- | | (92) | | | | | 1785? | |
| 129 | 746 | 716 | 4:59.2 | -68:52 | 6x 7 92 | 54 | 611 | 10C | 61 | .20 | 132 | -- | | (92) | | | | | 1785? | |
| 130 | 746 | 714 | 4:59.2 | -68:52 | 8x 8 252 | 130 | 2720 | 30C | 91 | .20 | 196 | -- | | (92) | | | | | 1785? | |
| 124 | 885 | 738 | 4:59.7 | -65:55 | 13x10 | 97 | 935 | 1L | 935 | .10 | 573 | (CL..LH15) | | | | | | | 1787 | |
| 125 | 890 | 739 | 4:59.7 | -65:55 | 22x18 | 218 | 178 | 5819 | 3L | 1940 | .10 | 3260 | (CL..LH15) | | | | | | 1787 | |
| 129 | 890 | 741 | 4:59.7 | -65:55 | 20x20 | 124 | 47 | 12250 | 10C | 1225 | .10 | 1800 | (CL..LH15) | | | | | | 1787 | |
| 130 | 890 | 739 | 4:59.7 | -65:55 | 20x19 | 402 | 151 | 27600 | 30C | 920 | .10 | 1353 | (CL..LH15) | | | | | | 1787 | |
| 124 | 653 | 700 | 4:59.9 | -70:51 | 4x 4 77 | 72 | 48 | 1L | 48 | .15 | 103 | | | | | | | | -- | |
| 125 | 653 | 699 | 4:59.9 | -70:51 | 4x 4 199 | 182 | 163 | 3L | 54 | .15 | 117 | | | | | | | | -- | |
| 129 | 654 | 700 | 4:59.9 | -70:51 | 4x 3 58 | 43 | 142 | 10C | 14 | .15 | 25 | | | | | | | | -- | |
| 130 | 654 | 697 | 4:59.9 | -70:51 | 6x 4 151 | 110 | 510 | 30C | 17 | .15 | 30 | | | | | | | | -- | |

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| FR. X | Y | R.A. | DEC. | X*Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAD NO. | M | SP |
|-------|-----|------|--------|--------|------|---------|------|-----|-----|-----|-----|--------|------|----|--------|------|-------|---------|---------|---|----------------|
| 125 | 716 | 708 | 4:59.9 | -69:31 | 2X 2 | 195 188 | 22 | 3L | 7 | .16 | 17 | -- | | | | | | 1793? | | | |
| 129 | 716 | 707 | 4:59.9 | -69:31 | 4X 2 | 62 55 | 44 | 10C | 4 | .16 | 8 | -- | | | | | | 1793? | | | |
| 130 | 716 | 705 | 4:59.9 | -69:31 | 3X 3 | 162 137 | 152 | 30C | 5 | .16 | 10 | -- | | | | | | 1793? | | | |
| 130 | 764 | 713 | 4:59.9 | -68:31 | 2X 2 | 130 122 | 32 | 30C | 1 | .05 | 1 | | | | | | | | | | |
| 124 | 786 | 717 | 5:00.0 | -68:03 | 4X 5 | 78 75 | 11 | 1L | 11 | .14 | 23 | | | | 16A | 4.8 | 0.21 | | | | 249164? 8.2 A2 |
| 125 | 786 | 719 | 5:00.0 | -68:03 | 4X 5 | 193 188 | 21 | 3L | 7 | .14 | 14 | | | | 16A | 4.8 | 0.31 | | | | |
| 129 | 788 | 720 | 5:00.0 | -68:03 | 4X 5 | 60 56 | 31 | 10C | 3 | .14 | 5 | | | | 16A | 4.8 | 0.91 | | | | |
| 130 | 787 | 718 | 5:00.0 | -68:03 | 4X 5 | 152 138 | 106 | 30C | 4 | .14 | 6 | | | | 16A | 4.8 | 0.80 | | | | |
| 124 | 682 | 702 | 5:00.1 | -70:15 | 9X10 | 86 77 | 152 | 1L | 152 | .16 | 342 | | | | 186A-E | 57.5 | 0.17 | | | | |
| 125 | 682 | 703 | 5:00.1 | -70:15 | 9X10 | 236 196 | 610 | 3L | 203 | .16 | 457 | | | | 186A-E | 57.5 | 0.13 | | | | |
| 129 | 682 | 702 | 5:00.1 | -70:15 | 9X10 | 127 69 | 820 | 10C | 82 | .16 | 152 | | | | 186A-E | 57.5 | 0.38 | | | | |
| 130 | 682 | 699 | 5:00.1 | -70:15 | 9X10 | 385 176 | 3118 | 30C | 104 | .16 | 192 | | | | 186A-E | 57.5 | 0.30 | | | | |
| 124 | 877 | 733 | 5:00.1 | -66:09 | 4X 4 | 70* 71 | -6 | 1L | -6 | .13 | -- | | | | 13 | 4.0 | -- | | | | |
| 125 | 878 | 735 | 5:00.1 | -66:09 | 4X 4 | 180*182 | 8 | 3L | 3 | .13 | 5 | | | | 13 | 4.0 | 0.77* | | | | |
| 129 | 877 | 734 | 5:00.1 | -66:09 | 4X 4 | 58* 58 | 8 | 10C | 1 | .13 | 1 | | | | 13 | 4.0 | 3.04* | | | | |
| 130 | 877 | 732 | 5:00.1 | -66:09 | 4X 4 | 137*140 | 20 | 30C | 1 | .13 | 1 | | | | 13 | 4.0 | 3.64 | | | | |
| 124 | 869 | 732 | 5:00.2 | -66:19 | 4X 4 | 73* 71 | 6 | 1L | 6 | .15 | 13 | | | | 14 | 11.5 | 0.89 | | | | |
| 125 | 870 | 733 | 5:00.2 | -66:19 | 4X 4 | 178*181 | 16 | 3L | 5 | .15 | 12 | | | | 14 | 11.5 | 1.00 | | | | |
| 129 | 869 | 734 | 5:00.2 | -66:19 | 4X 4 | 58* 57 | 48 | 10C | 5 | .15 | 9 | | | | 14 | 11.5 | 1.34 | | | | |
| 130 | 869 | 732 | 5:00.4 | -66:19 | 4X 4 | 143*140 | 55 | 30C | 2 | .15 | 3 | | | | 14 | 11.5 | 3.5* | | | | |
| 124 | 829 | 727 | 5:00.4 | -67:09 | 2X 2 | 74 71 | 10 | 1L | 10 | .15 | 22 | | | | | | | -- | | | |
| 125 | 829 | 728 | 5:00.4 | -67:09 | 2X 2 | 190 178 | 43 | 3L | 14 | .15 | 31 | | | | | | | -- | | | |
| 129 | 828 | 726 | 5:00.4 | -67:09 | 2X 4 | 59 49 | 74 | 10C | 7 | .15 | 13 | | | | | | | -- | | | |
| 130 | 828 | 724 | 5:00.4 | -67:09 | 5X 8 | 144 111 | 765 | 30C | 26 | .15 | 45 | | | | | | | -- | | | |
| 124 | 725 | 707 | 5:00.6 | -69:18 | 2X 2 | 75* 74 | 5 | 1L | 5 | .17 | 12 | | | | | | | -- | | | |

NRL REPORT 8206

| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAD NO. | M | SP |
|-----|-----|-----|--------|--------|-----|----|---------|-----|------|-----|-----|-----|-----|--------|------|----|-------|-----|-------|---------|---------|----|----|
| 125 | 726 | 710 | 5:00.6 | -69:18 | 2X | 2 | 195 | 186 | 29 | 3L | 10 | .17 | 23 | | | | | | | -- | | | |
| 129 | 727 | 707 | 5:00.6 | -69:18 | 2X | 2 | 58 | 52 | 21 | 10C | 2 | .17 | 4 | | | | | | | -- | | | |
| 130 | 727 | 705 | 5:00.6 | -69:18 | 2X | 2 | 149 | 130 | 65 | 30C | 2 | .17 | 4 | | | | | | | -- | | | |
| 124 | 860 | 729 | 5:00.7 | -66:27 | 2X | 2 | 73 | 72 | 3 | 1L | 3 | .15 | 6 | | | 15 | | 4.0 | 0.7* | | | | |
| 125 | 861 | 732 | 5:00.7 | -66:27 | 2X | 2 | 178 | 176 | 5 | 3L | 2 | .15 | 4 | | | 15 | | 4.0 | 1.11* | | | | |
| 129 | 862 | 729 | 5:00.7 | -66:27 | 2X | 2 | 51* | 50 | 6 | 10C | 1 | .15 | 1 | | | 15 | | 4.0 | 3.7* | | | | |
| 130 | 861 | 725 | 5:00.7 | -66:27 | 2X | 2 | 112*112 | | 3 | 30C | 0 | .15 | 0 | | | 15 | | 4.0 | 22.2* | | | | |
| 124 | 722 | 705 | 5:00.8 | -69:25 | 4X | 4 | 80 | 73 | 57 | 1L | 57 | .05 | 74 | | | | | | | 249166 | 9.0 | A0 | |
| 125 | 722 | 706 | 5:00.8 | -69:25 | 4X | 4 | 204 | 185 | 172 | 3L | 57 | .05 | 74 | | | | | | | 249166 | 9.0 | A0 | |
| 129 | 722 | 704 | 5:00.8 | -69:25 | 6X | 5 | 82 | 53 | 406 | 10C | 41 | .05 | 49 | | | | | | | 249166 | 9.0 | A0 | |
| 130 | 722 | 702 | 5:00.8 | -69:25 | 8X | 8 | 228 | 128 | 2340 | 30C | 78 | .05 | 94 | | | | | | | 249166 | 9.0 | A0 | |
| 124 | 780 | 712 | 5:00.9 | -68:10 | 3X | 3 | 78 | 74 | 19 | 1L | 19 | .14 | 39 | -- | | | | | 1806? | | | | |
| 125 | 782 | 715 | 5:00.9 | -68:10 | 4X | 4 | 199 | 185 | 156 | 3L | 52 | .14 | 107 | -- | | | | | 1806? | | | | |
| 129 | 780 | 714 | 5:00.9 | -68:10 | 4X | 7 | 71 | 50 | 352 | 10C | 35 | .14 | 60 | -- | | | | | 1806? | | | | |
| 130 | 780 | 712 | 5:00.9 | -68:10 | 4X | 9 | 186 | 131 | 895 | 30C | 30 | .14 | 51 | -- | | | | | 1806? | | | | |
| 124 | 775 | 711 | 5:01.2 | -68:18 | 3X | 3 | 82 | 73 | 50 | 1L | 50 | .15 | 108 | -- | | | | | 1806? | | | | |
| 125 | 775 | 713 | 5:01.2 | -68:18 | 5X | 5 | 199 | 183 | 163 | 3L | 54 | .15 | 117 | -- | | | | | 1806? | | | | |
| 129 | 776 | 712 | 5:01.2 | -68:18 | 7X | 6 | 77 | 49 | 683 | 10C | 68 | .15 | 122 | -- | | | | | 1806? | | | | |
| 130 | 776 | 710 | 5:01.2 | -68:18 | 10X | 8 | 210 | 116 | 2800 | 30C | 93 | .15 | 166 | -- | | | | | 1806? | | | | |
| 124 | 816 | 712 | 5:01.6 | -67:24 | 2X | 2 | 75 | 71 | 12 | 1L | 12 | .16 | 27 | | | | | | | -- | | | |
| 125 | 816 | 716 | 5:01.6 | -67:24 | 2X | 2 | 187 | 178 | 36 | 3L | 12 | .16 | 27 | | | | | | | -- | | | |
| 129 | 819 | 719 | 5:01.6 | -67:24 | 2X | 2 | 53 | 47 | 23 | 10C | 2 | .16 | 4 | | | | | | | -- | | | |
| 130 | 819 | 716 | 5:01.6 | -67:24 | 2X | 2 | 130 | 110 | 74 | 30C | 2 | .16 | 5 | | | | | | | -- | | | |
| 124 | 690 | 695 | 5:02.0 | -70:05 | 2X | 2 | 76 | 75 | 4 | 1L | 4 | .16 | 9 | | | | | | | -- | | | |
| 125 | 690 | 694 | 5:02.0 | -70:05 | 2X | 2 | 201 | 192 | 25 | 3L | 8 | .16 | 19 | | | | | | | -- | | | |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAD NO. | M | SP |
|-----|-----|-----|--------|--------|-------|-----|------|-------|------|------|------|------|------|--------|------|-----|-------|------|------|---------|---------|---|----|
| 129 | 691 | 695 | 5:02.0 | -70:05 | 4X | 3 | 65 | 53 | 84 | 100 | 8 | .16 | 16 | | | | | | | -- | | | |
| 130 | 691 | 693 | 5:02.0 | -70:05 | 5X | 7 | 159 | 123 | 835 | 300 | 28 | .16 | 51 | | | | | | | -- | | | |
| 124 | 881 | 724 | 5:02.1 | -68:08 | 21X23 | 76 | 71 | 834 | 11 | 834 | .12 | 1550 | | | | | 10.13 | 802. | 0.52 | | | | |
| 125 | 881 | 726 | 5:02.1 | -68:08 | 21X23 | 196 | 180 | 2723 | 3L | 908 | .12 | 1685 | | | | | 10.13 | 802. | 0.48 | | | | |
| 129 | 880 | 726 | 5:02.1 | -68:08 | 21X23 | 8f | 55 | 4176 | 100 | 418 | .12 | 665 | | | | | 10.13 | 802. | 1.21 | | | | |
| 130 | 880 | 724 | 5:02.1 | -68:08 | 21X23 | 236 | 133 | 13993 | 300 | 466 | .12 | 742 | | | | | 10.13 | 802. | 1.08 | | | | |
| 129 | 809 | 714 | 5:02.1 | -67:36 | 6X | 5 | 56 | 50 | 61 | 100 | 6 | .10 | 9 | | | | | | | -- | | | |
| 124 | 881 | 724 | 5:02.2 | -66:08 | 2X | 2 | 76 | 71 | 17 | 11 | 17 | .15 | 37 | -- | | | (13) | | 1805 | | | | |
| 125 | 881 | 726 | 5:02.2 | -66:08 | 3X | 3 | 196 | 182 | 75 | 3L | 25 | .15 | 54 | -- | | | (13) | | 1805 | | | | |
| 129 | 880 | 726 | 5:02.2 | -66:08 | 12X17 | 85 | 48 | 2706 | 100 | 271 | .15 | 465 | -- | | | | (13) | | 1805 | | | | |
| 130 | 880 | 724 | 5:02.2 | -66:08 | 27X75 | 236 | 105 | 35000 | 300 | 1167 | .15 | 2075 | -- | | | | (13) | | 1805 | | | | |
| 124 | 650 | 688 | 5:02.4 | -70:57 | 2X | 2 | 76 | 73 | 10 | 11 | 10 | .14 | 21 | | | | | | | -- | | | |
| 125 | 650 | 692 | 5:02.4 | -70:57 | 2X | 2 | 193 | 182 | 36 | 3L | 12 | .14 | 25 | | | | | | | -- | | | |
| 129 | 651 | 687 | 5:02.4 | -70:57 | 2X | 2 | 51 | 43 | 32 | 100 | 3 | .14 | 5 | | | | | | | -- | | | |
| 130 | 651 | 685 | 5:02.4 | -70:57 | 2X | 2 | 124 | 108 | 58 | 300 | 2 | .14 | 3 | | | | | | | -- | | | |
| 124 | 488 | 669 | 5:02.5 | -74:25 | 6X | 6 | 122 | 69 | 705 | 11 | 705 | .05 | 917 | | | | | | | 256152 | 7.0 A0 | | |
| 125 | 489 | 670 | 5:02.5 | -74:25 | 8X | 9 | 344 | 175 | 3410 | 3L | 1137 | .05 | 1480 | | | | | | | 256152 | 7.0 A0 | | |
| 129 | 488 | 669 | 5:02.5 | -74:25 | 9X | 9 | 257 | 30 | 4723 | 100 | 472 | .05 | 571 | | | | | | | 256152 | 7.0 A0 | | |
| 130 | 488 | 665 | 5:02.5 | -74:25 | 11X13 | 645 | 72 | 23700 | 300 | 790* | .05 | 955 | | | | | | | | 256152 | 7.0 A0 | | |
| 129 | 852 | 716 | 5:03.0 | -66:44 | 2X | 2 | 62 | 49 | 45 | 100 | 5 | .16 | 8 | | | | | | | -- | | | |
| 130 | 852 | 714 | 5:03.0 | -66:44 | 4X | 5 | 148 | 113 | 405 | 300 | 13 | .16 | 25 | | | | | | | -- | | | |
| 124 | 739 | 696 | 5:03.3 | -69:02 | 4X | 5 | 79* | 78 | 27 | 11 | 27 | .16 | 61 | LH16 | 1.5 | 3.0 | 2 | | | | | | |
| 125 | 740 | 696 | 5:03.3 | -69:02 | 4X | 5 | 218* | 210 | 83 | 3L | 28 | .16 | 63 | LH16 | 1.5 | 3.0 | 2 | | | | | | |
| 129 | 740 | 696 | 5:03.3 | -69:02 | 4X | 5 | 94* | 87 | 96 | 100 | 10 | .16 | 18 | LH16 | 1.5 | 3.0 | 2 | | | | | | |
| 130 | 739 | 693 | 5:03.3 | -69:02 | 4X | 5 | 310* | 260 | 376 | 300 | 13 | .16 | 23 | LH16 | 1.5 | 3.0 | 2 | | | | | | |

NRL REPORT 8206

| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LM NO. | SIZE | BS | N MO. | MA | MI | MGC NO. | SAC NO. | N | SP |
|-----|-----|-----|--------|--------|------|-----|-----|-----|------|-----|-----|-----|-----|------------|------|-----|-------|------|------|---------|---------|---|----|
| 124 | 836 | 710 | 5:03.6 | -67:01 | 6X | 3 | 74 | 70 | 48 | IL | 48 | .15 | 103 | | | | | | | | -- | | |
| 125 | 837 | 711 | 5:03.6 | -67:01 | 5X | 4 | 192 | 176 | 189 | 3L | 63 | .15 | 136 | | | | | | | | -- | | |
| 129 | 837 | 713 | 5:03.6 | -67:01 | 4X | 4 | 63 | 45 | 206 | 10C | 21 | .15 | 37 | | | | | | | | -- | | |
| 130 | 838 | 711 | 5:03.6 | -67:01 | 7X10 | 157 | 111 | 943 | 30C | 31 | .15 | 56 | | | | | | | | | -- | | |
| 124 | 758 | 698 | 5:03.7 | -68:40 | 2X | 2 | 79 | 73 | 21 | IL | 21 | .18 | 52 | | | | | | | | -- | | |
| 125 | 758 | 698 | 5:03.7 | -68:40 | 3X | 2 | 193 | 186 | 38 | 3L | 13 | .18 | 31 | | | | | | | | -- | | |
| 129 | 758 | 698 | 5:03.7 | -68:40 | 2X | 2 | 64 | 54 | 39 | 10C | 4 | .18 | 8 | | | | | | | | -- | | |
| 130 | 758 | 696 | 5:03.7 | -68:40 | 5X | 3 | 159 | 132 | 263 | 30C | 9 | .18 | 18 | | | | | | | | -- | | |
| 124 | 818 | 704 | 5:03.8 | -67:23 | 3X | 4 | 73 | 74 | 3 | IL | 3 | .17 | 7 | (LM19) | | | 17.48 | 8.9 | 1.25 | 1814-20 | | | |
| 125 | 821 | 707 | 5:03.8 | -67:23 | 3X | 4 | 198 | 197 | 4 | 3L | 1 | .17 | 2 | (LM19) | | | 17.48 | 8.9 | 3.8 | 1814-20 | | | |
| 129 | 824 | 706 | 5:03.8 | -67:23 | 3X | 4 | 130 | 113 | 67 | 10C | 7 | .17 | 13 | (LM19) | | | 17.48 | 8.9 | 0.69 | 1814-20 | | | |
| 130 | 821 | 705 | 5:03.8 | -67:23 | 3X | 4 | 255 | 241 | 182 | 30C | 6 | .17 | 12 | (LM19) | | | 17.48 | 8.9 | 0.76 | 1814-20 | | | |
| 124 | 738 | 693 | 5:03.9 | -69:03 | 51 | | 84 | 79 | 82 | IL | 82 | .16 | 185 | LM16,17,20 | 22.5 | 12 | | | | | | | |
| 125 | 740 | 693 | 5:03.9 | -69:03 | 53 | | 215 | 207 | 402 | 3L | 134 | .16 | 301 | LM16,17,20 | 22.5 | 12 | | | | | | | |
| 129 | 740 | 693 | 5:03.9 | -69:03 | 51 | | 108 | 90 | 455 | 10C | 46 | .16 | 84 | LM16,17,20 | 22.5 | 12 | | | | | | | |
| 130 | 738 | 690 | 5:03.9 | -69:03 | 48 | | 337 | 248 | 1380 | 30C | 46 | .16 | 85 | LM16,17,20 | 22.5 | 12 | | | | | | | |
| 124 | 739 | 694 | 5:03.9 | -69:01 | 45 | | 82 | 80 | 54 | IL | 54 | .16 | 122 | LM16,20 | 20.5 | 7 | | | | | | | |
| 125 | 740 | 694 | 5:03.9 | -69:01 | 45 | | 218 | 209 | 168 | 3L | 56 | .16 | 126 | LM16,20 | 20.5 | 7 | | | | | | | |
| 124 | 736 | 692 | 5:04.0 | -69:05 | 4X | 3 | 86 | 83 | 16 | IL | 16 | .16 | 36 | LM17 | 2.0 | 1.0 | 5 | | | | | | |
| 125 | 738 | 693 | 5:04.0 | -69:05 | 4X | 3 | 228 | 218 | 42 | 3L | 14 | .16 | 32 | LM17 | 2.0 | 1.0 | 5 | | | | | | |
| 129 | 737 | 692 | 5:04.0 | -69:05 | 4X | 3 | 115 | 101 | 52 | 10C | 5 | .16 | 10 | LM17 | 2.0 | 1.0 | 5 | | | | | | |
| 130 | 737 | 690 | 5:04.0 | -69:05 | 4X | 3 | 344 | 303 | 214 | 30C | 7 | .16 | 13 | LM17 | 2.0 | 1.0 | 5 | | | | | | |
| 124 | 823 | 705 | 5:04.0 | -67:16 | 8X | 8 | 86 | 76 | 147 | IL | 147 | .17 | 347 | LM19 | 7.0 | 7.0 | 18 | (17) | | | 1814-20 | | |
| 125 | 825 | 706 | 5:04.0 | -67:16 | 8X | 8 | 228 | 197 | 597 | 3L | 199 | .17 | 470 | LM19 | 7.0 | 7.0 | 18 | (17) | | | 1814-20 | | |
| 129 | 824 | 706 | 5:04.0 | -67:16 | 8X | 8 | 130 | 74 | 1024 | 10C | 102 | .17 | 197 | LM19 | 7.0 | 7.0 | 18 | (17) | | | 1814-20 | | |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BO | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|-----|----|---------|-------|-----|-----|------|------|--------|--------|------|----|-------|-----|-------|---------|---------|---|----|
| 130 | 826 | 704 | 5:04.0 | -67:16 | 8X | 8 | 312*212 | 2172 | 30C | 72 | .17* | 129 | LH19 | 7.0 | 7.0 | 18 | (17) | | | 1814-20 | | | |
| 124 | 678 | 684 | 5:04.1 | -70:20 | 9X | 5 | 93* 83 | 136 | 1L | 136 | .16* | 306 | LH18 | 8.0 | 4.0 | 20 | (188) | | | 1813.23 | | | |
| 125 | 680 | 685 | 5:04.1 | -70:20 | 9X | 5 | 229*220 | 381 | 3L | 127 | .16* | 286 | LH18 | 8.0 | 4.0 | 20 | (188) | | | 1813.23 | | | |
| 129 | 681 | 683 | 5:04.1 | -70:20 | 9X | 5 | 93* 92 | 201 | 10C | 20 | .16* | 37 | LH18 | 8.0 | 4.0 | 20 | (188) | | | 1813.23 | | | |
| 130 | 681 | 681 | 5:04.1 | -70:20 | 9X | 5 | 264*277 | 910 | 30C | 30 | .16* | 56 | LH18 | 8.0 | 4.0 | 20 | (188) | | | 1813.23 | | | |
| 124 | 681 | 685 | 5:04.1 | -70:18 | 2X | 2 | 80* 78 | -1 | 1L | -1 | .16 | -- | (LH18) | | | | 188 | 0.1 | -- | 1813.23 | | | |
| 125 | 682 | 686 | 5:04.1 | -70:18 | 2X | 2 | 210*211 | 3 | 3L | 1 | .16 | 2 | (LH18) | | | | 188 | 0.1 | 0.02* | 1813.23 | | | |
| 129 | 683 | 683 | 5:04.1 | -70:18 | 2X | 2 | 96 92 | 5 | 10C | 1 | .16 | 1 | (LH18) | | | | 188 | 0.1 | 0.05* | 1813.23 | | | |
| 130 | 683 | 681 | 5:04.1 | -70:18 | 2X | 2 | 275 260 | 29 | 30C | 1 | .16 | 2 | (LH18) | | | | 188 | 0.1 | 0.03 | 1813.23 | | | |
| 124 | 642 | 678 | 5:04.2 | -71:09 | 2X | 2 | 77 72 | 16 | 1L | 16 | .13 | 31 | | | | | | | | -- | | | |
| 125 | 644 | 678 | 5:04.2 | -71:09 | 2X | 2 | 193 184 | 34 | 3L | 11 | .13 | 22 | | | | | | | | -- | | | |
| 129 | 642 | 679 | 5:04.2 | -71:09 | 2X | 2 | 48 39 | 32 | 10C | 3 | .13 | 5 | | | | | | | | -- | | | |
| 130 | 642 | 676 | 5:04.2 | -71:09 | 2X | 2 | 111 94 | 64 | 30C | 2 | .13 | 4 | | | | | | | | -- | | | |
| 124 | 865 | 711 | 5:04.3 | -66:28 | 6X | 6 | 80 70 | 281 | 1L | 281 | .17 | 663 | -- | | | | | | | 1818 | | | |
| 125 | 867 | 713 | 5:04.3 | -66:28 | 10X | 10 | 213 178 | 1290 | 3L | 430 | .17 | 1015 | -- | | | | | | | 1818 | | | |
| 129 | 665 | 713 | 5:04.3 | -66:28 | 9X | 10 | 109 48 | 2467 | 10C | 247 | .17 | 474 | -- | | | | | | | 1818 | | | |
| 130 | 865 | 711 | 5:04.3 | -66:28 | 11X | 14 | 329 118 | 10100 | 30C | 337 | .17 | 646 | -- | | | | | | | 1818 | | | |
| 124 | 769 | 695 | 5:04.4 | -68:29 | 5X | 3 | 79 74 | 37 | 1L | 37 | .15 | 80 | | | | | | | | -- | | | |
| 125 | 768 | 696 | 5:04.4 | -68:29 | 3X | 3 | 201 187 | 80 | 3L | 27 | .15 | 57 | | | | | | | | -- | | | |
| 129 | 768 | 693 | 5:04.4 | -68:29 | 3X | 2 | 70 57 | 66 | 10C | 7 | .15 | 12 | | | | | | | | -- | | | |
| 130 | 768 | 692 | 5:04.4 | -68:29 | 4X | 6 | 181 141 | 502 | 30C | 17 | .15 | 30 | | | | | | | | -- | | | |
| 124 | 739 | 691 | 5:04.5 | -69:01 | 5X | 5 | 82* 82 | 5 | 1L | 5 | .16 | 11 | LH20 | 4.0 | 4.0 | 5 | | | | | | | |
| 125 | 741 | 691 | 5:04.5 | -69:01 | 5X | 5 | 212*211 | 28 | 3L | 9 | .16 | 20 | LH20 | 4.0 | 4.0 | 5 | | | | | | | |
| 129 | 740 | 691 | 5:04.5 | -69:01 | 5X | 5 | 104* 98 | 105 | 10C | 11 | .16 | 19 | LH20 | 4.0 | 4.0 | 5 | | | | | | | |
| 130 | 739 | 688 | 5:04.5 | -69:01 | 5X | 5 | 277*264 | 180 | 30C | 6 | .16 | 11 | LH20 | 4.0 | 4.0 | 5 | | | | | | | |

NRL REPORT 8206

| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|----|----|-----|-----|-----|-----|-----|------|----|-------------------|------|-----|-------|------|-------|---------|---------|---|----|
| 124 | 798 | 698 | 5:04.6 | -67:49 | 6X | 5 | 81 | 77 | 36 | 1L | 36 | .10* | 60 | LH21 | 5.0 | 3.0 | 4 | | | | | | |
| 125 | 799 | 699 | 5:04.6 | -67:49 | 6X | 5 | 207 | 198 | 87 | 3L | 29 | .10* | 49 | LH21 | 5.0 | 3.0 | 4 | | | | | | |
| 129 | 798 | 699 | 5:04.6 | -67:49 | 6X | 5 | 91 | 69 | 235 | 10C | 24 | .10* | 35 | LH21 | 5.0 | 3.0 | 4 | | | | | | |
| 130 | 798 | 698 | 5:04.6 | -67:49 | 6X | 5 | 238 | 177 | 559 | 30C | 19 | .10* | 27 | LH21 | 5.0 | 3.0 | 4 | | | | | | |
| 124 | 728 | 686 | 5:04.8 | -69:19 | 2X | 2 | 77 | 74 | 11 | 1L | 11 | .16 | 25 | -- | | | | | | 1828.35 | | | |
| 125 | 730 | 686 | 5:04.8 | -69:19 | 2X | 2 | 193 | 186 | 27 | 3L | 9 | .16 | 20 | -- | | | | | | 1828.35 | | | |
| 129 | 727 | 687 | 5:04.8 | -69:19 | 2X | 2 | 59 | 49 | 36 | 10C | 4 | .16 | 7 | -- | | | | | | 1828.35 | | | |
| 130 | 727 | 685 | 5:04.8 | -69:19 | 3X | 3 | 148 | 121 | 188 | 30C | 6 | .16 | 12 | -- | | | | | | 1828.35 | | | |
| 124 | 657 | 676 | 5:04.9 | -70:48 | 4X | 4 | 89 | 89 | 42 | 1L | 42 | .14 | 86 | (LH24) | | | 190 | 21.3 | 0.25 | 1833.37 | | | |
| 125 | 659 | 679 | 5:04.9 | -70:48 | 4X | 4 | 260 | 238 | 125 | 3L | 42 | .14 | 86 | (LH24) | | | 190 | 21.3 | 0.25 | 1833.37 | | | |
| 129 | 658 | 677 | 5:04.9 | -70:48 | 4X | 4 | 143 | 132 | 273 | 10C | 27 | .14 | 47 | (LH24) | | | 190 | 21.3 | 0.46 | 1833.37 | | | |
| 130 | 659 | 675 | 5:04.9 | -70:48 | 4X | 4 | 605 | 466 | 680 | 30C | 23 | .14 | 39 | (LH24) | | | 190 | 21.3 | 0.55 | 1833.37 | | | |
| 124 | 809 | 697 | 5:04.9 | -67:38 | 4X | 5 | 75 | 74 | 12 | 1L | 12 | .08 | 18 | (LH22) | | | 21 | 11.8 | 0.65 | | | | |
| 125 | 811 | 699 | 5:04.9 | -67:38 | 4X | 5 | 201 | 194 | 48 | 3L | 16 | .08 | 24 | (LH22) | | | 21 | 11.8 | 0.49 | | | | |
| 129 | 809 | 699 | 5:04.9 | -67:38 | 4X | 5 | 65 | 59 | 61 | 10C | 6 | .08 | 8 | (LH22) | | | 21 | 11.8 | 1.42 | | | | |
| 130 | 810 | 697 | 5:04.9 | -67:38 | 4X | 5 | 176 | 143 | 204 | 30C | 7 | .08 | 9 | (LH22) | | | 21 | 11.8 | 1.28 | | | | |
| 124 | 812 | 697 | 5:04.9 | -67:34 | 6X | 4 | 77 | 74 | 22 | 1L | 22 | .08 | 33 | LH22 | 5.0 | 2.0 | 6 | | | | | | |
| 125 | 811 | 699 | 5:04.9 | -67:34 | 6X | 4 | 201 | 193 | 61 | 3L | 20 | .08 | 30 | LH22 | 5.0 | 2.0 | 6 | | | | | | |
| 129 | 810 | 699 | 5:04.9 | -67:34 | 6X | 4 | 69 | 58 | 76 | 10C | 8 | .08 | 10 | LH22 | 5.0 | 2.0 | 6 | | | | | | |
| 130 | 812 | 697 | 5:04.9 | -67:34 | 6X | 4 | 151 | 134 | 247 | 30C | 8 | .08 | 11 | LH22 | 5.0 | 2.0 | 6 | | | | | | |
| 124 | 786 | 593 | 5:05.1 | -68:08 | 4X | 3 | 91 | 89 | 23 | 1L | 23 | .11 | 41 | (LH25, SA0249185) | | | 23A | 14.9 | 0.37 | | | | |
| 125 | 784 | 595 | 5:05.1 | -68:08 | 4X | 3 | 228 | 226 | 73 | 3L | 24 | .11 | 42 | (LH25, SA0249185) | | | 23A | 14.9 | 0.35 | | | | |
| 129 | 783 | 594 | 5:05.1 | -68:08 | 4X | 3 | 134 | 134 | 210 | 10C | 21 | .11 | 32 | (LH25, SA0249185) | | | 23A | 14.9 | 0.46 | | | | |
| 130 | 785 | 592 | 5:05.1 | -68:08 | 4X | 3 | 667 | 481 | 756 | 30C | 25 | .11 | 39 | (LH25, SA0249185) | | | 23A | 14.9 | 0.39 | | | | |
| 124 | 796 | 696 | 5:05.1 | -67:52 | 2X | 2 | 78 | 78 | 6 | 1L | 6 | .10 | 10 | (LH21) | | | 22 | 0.1 | 0.01* | | | | |

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| R. X | Y | R.A. | DEC. | X | Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | M NO. | HA | HI | NCC NO. | SAD NO. | M | SP |
|------|-----|------|--------|--------|-------|-----|-----|-------|-----|------|-----|------|--------|------|-----|-------|-----|------|---------|---------|----|----|
| 125 | 797 | 697 | 5:05.1 | -67:52 | 2X 2 | 193 | 194 | 12 | 3L | 4 | .10 | 7 | (LH21) | | | 22 | 0.1 | 0.02 | | | | |
| 129 | 798 | 699 | 5:05.1 | -67:52 | 2X 2 | 91 | 86 | 14 | 10C | 1 | .10 | 2 | (LH21) | | | 22 | 0.1 | 0.06 | | | | |
| 130 | 799 | 697 | 5:05.1 | -67:52 | 2X 2 | 248 | 232 | 42 | 30C | 1 | .10 | 2 | (LH21) | | | 22 | 0.1 | 0.06 | | | | |
| 124 | 651 | 676 | 5:05.2 | -70:58 | 3X 3 | 83 | 80 | 12 | 1L | 12 | .14 | 25 | (LH23) | | | 191A8 | 8.4 | 0.34 | | | | |
| 125 | 652 | 677 | 5:05.2 | -70:58 | 3X 3 | 208 | 200 | 28 | 3L | 9 | .14 | 18 | (LH23) | | | 191A8 | 8.4 | 0.46 | | | | |
| 129 | 651 | 676 | 5:05.2 | -70:58 | 3X 3 | 88 | 69 | 62 | 10C | 6 | .14 | 11 | (LH23) | | | 191A8 | 8.4 | 0.79 | | | | |
| 130 | 651 | 673 | 5:05.2 | -70:58 | 3X 3 | 236 | 177 | 200 | 30C | 7 | .14 | 11 | (LH23) | | | 191A8 | 8.4 | 0.74 | | | | |
| 124 | 651 | 676 | 5:05.2 | -70:55 | 4X 3 | 83 | 79 | 19 | 1L | 19 | .14 | 39 | LH23 | 1.5 | 1.0 | -- | | | | | | |
| 125 | 653 | 677 | 5:05.2 | -70:55 | 4X 3 | 202 | 198 | 34 | 3L | 11 | .14 | 23 | LH23 | 1.5 | 1.0 | -- | | | | | | |
| 129 | 651 | 676 | 5:05.2 | -70:55 | 4X 3 | 88 | 66 | 66 | 10C | 7 | .14 | 11 | LH23 | 1.5 | 1.0 | -- | | | | | | |
| 130 | 652 | 673 | 5:05.2 | -70:55 | 4X 3 | 221 | 167 | 283 | 30C | 9 | .14 | 16 | LH23 | 1.5 | 1.0 | -- | | | | | | |
| 124 | 785 | 693 | 5:05.2 | -68:09 | 9X12 | 94 | 73 | 1004 | 1L | 1004 | .05 | 1305 | | | | | | | 249185 | 7.8 | 89 | |
| 125 | 783 | 694 | 5:05.2 | -68:09 | 14X14 | 221 | 184 | 4012 | 3L | 1337 | .05 | 1740 | | | | | | | 249185 | 7.8 | 89 | |
| 129 | 785 | 694 | 5:05.2 | -68:09 | 13X18 | 220 | 48 | 7343 | 10C | 734 | .05 | 888 | | | | | | | 249185 | 7.8 | 89 | |
| 130 | 785 | 692 | 5:05.2 | -68:09 | 13X15 | 667 | 118 | 22315 | 30C | 744 | .05 | 900 | | | | | | | 249185 | 7.8 | 89 | |
| 124 | 842 | 702 | 5:05.2 | -66:59 | 3X 4 | 71 | 72 | 8 | 1L | 8 | .15 | 17 | | | | 20 | 4.0 | 0.24 | | | | |
| 125 | 842 | 704 | 5:05.2 | -66:59 | 3X 4 | 184 | 184 | 14 | 3L | 5 | .15 | 10 | | | | 20 | 4.0 | 0.40 | | | | |
| 129 | 842 | 703 | 5:05.2 | -66:59 | 3X 4 | 55 | 52 | 12 | 10C | 1 | .15 | 2 | | | | 20 | 4.0 | 1.88 | | | | |
| 130 | 842 | 701 | 5:05.2 | -66:59 | 3X 4 | 128 | 122 | 25 | 30C | 1 | .15 | 1 | | | | 20 | 4.0 | 2.70 | | | | |
| 124 | 687 | 679 | 5:05.3 | -70:12 | 3X 3 | 82 | 81 | 7 | 1L | 7 | .16 | 16 | | | | 189 | 2.9 | 0.18 | | | | |
| 125 | 687 | 680 | 5:05.3 | -70:12 | 3X 3 | 221 | 217 | 19 | 3L | 6 | .16 | 14 | | | | 189 | 2.9 | 0.20 | | | | |
| 129 | 686 | 679 | 5:05.3 | -70:12 | 3X 3 | 94 | 87 | 30 | 10C | 3 | .16 | 6 | | | | 189 | 2.9 | 0.52 | | | | |
| 130 | 686 | 677 | 5:05.3 | -70:12 | 3X 3 | 269 | 242 | 104 | 30C | 3 | .16 | 6 | | | | 189 | 2.9 | 0.45 | | | | |
| 124 | 904 | 713 | 5:05.4 | -65:42 | 3X 2 | 74 | 70 | 20 | 1L | 20 | .14 | 41 | | | | | | | -- | | | |
| 125 | 903 | 710 | 5:05.4 | -65:42 | 3X 3 | 189 | 176 | 86 | 3L | 29 | .14 | 59 | | | | | | | -- | | | |

AD-A060 437

NAVAL RESEARCH LAB WASHINGTON D C

F/G 3/1

S201 FAR-ULTRAVIOLET ATLAS OF THE LARGE MAGELLANIC CLOUD.(U)

JUL 78 T PAGE, G R CARRUTHERS

UNCLASSIFIED

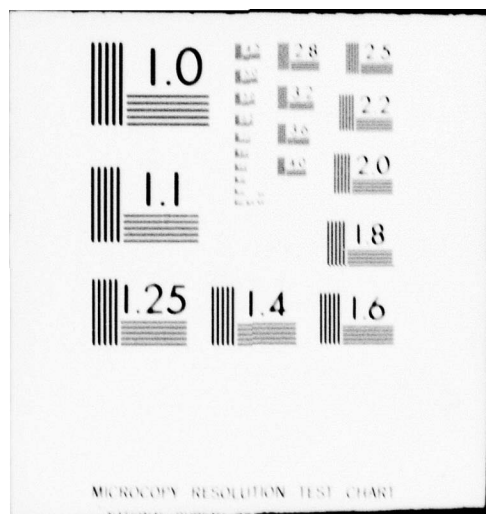
NRL-8206

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NRL REPORT 8206

| FR. X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | MA | MI | NGC NO. | SAO NO. | M | SP |
|-------|-----|------|--------|--------|-------|-----|-----|-------|-----|------|-----|------|---------|--------|------|-------|-------|-------|---------|-------------|---|----|
| 129 | 903 | 711 | 5:05.4 | -65:42 | 4X | 5 | 56 | 44 | 131 | 10C | 13 | .14 | 22 | | | | | | | -- | | |
| 130 | 903 | 709 | 5:05.4 | -65:42 | 6X | 6 | 134 | 101 | 680 | 30C | 23 | .14 | 39 | | | | | | | -- | | |
| 124 | 635 | 671 | 5:05.6 | -71:19 | 3X | 2 | 76 | 73 | 15 | 1L | 15 | .13 | 29 | | | | | | | -- | | |
| 125 | 636 | 674 | 5:05.6 | -71:19 | 3X | 3 | 193 | 181 | 78 | 3L | 26 | .13 | 51 | | | | | | | -- | | |
| 129 | 635 | 673 | 5:05.6 | -71:19 | 3X | 5 | 49 | 37 | 94 | 10C | 9 | .13 | 16 | | | | | | | -- | | |
| 130 | 635 | 671 | 5:05.6 | -71:19 | 5X | 6 | 123 | 90 | 574 | 30C | 19 | .13 | 32 | | | | | | | -- | | |
| 124 | 662 | 675 | 5:05.7 | -70:43 | 10X15 | 106 | 88 | 302 | 1L | 302 | .14 | 620 | LH24 | 10.0 | 16.0 | 51 | (190) | | | 1833.37 | | |
| 125 | 663 | 677 | 5:05.7 | -70:43 | 10X15 | 294 | 224 | 2167 | 3L | 722 | .14 | 1480 | LH24 | 10.0 | 16.0 | 51 | (190) | | | 1833.37 | | |
| 129 | 661 | 676 | 5:05.7 | -70:43 | 10X15 | 250 | 106 | 2246 | 10C | 225 | .14 | 384 | LH24 | 10.0 | 16.0 | 51 | (190) | | | 1833.37 | | |
| 130 | 663 | 672 | 5:05.7 | -70:43 | 10X15 | 803 | 368 | 5535 | 30C | 185 | .14 | 316 | LH24 | 10.0 | 16.0 | 51 | (190) | | | 1833.37 | | |
| 124 | 783 | 690 | 5:05.8 | -68:12 | 10X14 | 86 | 76 | 820 | 1L | 820 | .11 | 1450 | (LH25) | | | | 23.A | 205.1 | 0.14 | | | |
| 125 | 784 | 691 | 5:05.8 | -68:12 | 10X14 | 228 | 199 | 1978 | 3L | 659 | .11 | 1165 | (LH25) | | | | 23.A | 205.1 | 0.18 | | | |
| 129 | 783 | 691 | 5:05.8 | -68:12 | 10X14 | 118 | 70 | 3581 | 10C | 358 | .11 | 548 | (LH25) | | | | 23.A | 205.1 | 0.38 | | | |
| 130 | 783 | 689 | 5:05.8 | -68:12 | 10X14 | 357 | 181 | 12418 | 30C | 414 | .11 | 633 | (LH25) | | | | 23.A | 205.1 | 0.32 | | | |
| 124 | 666 | 673 | 5:06.2 | -70:40 | 271 | 100 | 80 | 2499 | 1L | 2499 | .14 | 5125 | LH24,26 | 330.0* | 105 | 105 | (190) | | | 1833-45 | | |
| 125 | 667 | 676 | 5:06.2 | -70:40 | 274 | 271 | 212 | 8071 | 3L | 2690 | .14 | 5520 | LH24,26 | 330.0* | 105 | 105 | (190) | | | 1833-45 | | |
| 129 | 665 | 674 | 5:06.2 | -70:40 | 280 | 192 | 79 | 17309 | 10C | 1731 | .14 | 2960 | LH24,26 | 330.0* | 105 | 105 | (190) | | | 1833-45 | | |
| 130 | 667 | 671 | 5:06.2 | -70:40 | 280 | 743 | 211 | 51099 | 30C | 1703 | .14 | 2915 | LH24,26 | 330.0* | 105 | 105 | (190) | | | 1833-45 | | |
| 124 | 786 | 688 | 5:06.3 | -68:06 | 4X | 4 | 83 | 83 | 14 | 1L | .11 | 25 | LH25 | 3.0 | 3.0 | 6 | (23) | | | (SA0249185) | | |
| 125 | 787 | 690 | 5:06.3 | -68:06 | 4X | 4 | 220 | 221 | 48 | 3L | .11 | 28 | LH25 | 3.0 | 3.0 | 6 | (23) | | | (SA0249185) | | |
| 129 | 784 | 688 | 5:06.3 | -68:06 | 4X | 4 | 117 | 105 | 99 | 10C | .11 | 15 | LH25 | 3.0 | 3.0 | 6 | (23) | | | (SA0249185) | | |
| 130 | 786 | 686 | 5:06.3 | -68:06 | 4X | 4 | 279 | 270 | 570 | 30C | .11 | 29 | LH25 | 3.0 | 3.0 | 6 | (23) | | | (SA0249185) | | |
| 124 | 839 | 695 | 5:06.6 | -67:01 | 2X | 2 | 76 | 74 | 7 | 1L | .13 | 14 | | | | | | | | -- | | |
| 125 | 842 | 692 | 5:06.6 | -67:01 | 2X | 2 | 190 | 180 | 31 | 3L | .13 | 20 | | | | | | | | -- | | |
| 124 | 670 | 672 | 5:06.7 | -70:32 | 10X16 | 110 | 89 | 471 | 1L | 471 | .14 | 966 | LH26 | 10.0 | 17.0 | 54 | (190) | | | 1845 | | |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | MGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|-------|------|-----|-------|-----|-----|------|------|----|--------|-----------|----|-------|----|----|---------|---------|---|----|
| 125 | 670 | 674 | 5:06.7 | -70:32 | 10x16 | 324 | 233 | 1834 | 3L | 611 | .14* | 1255 | | LM26 | 10.0 17.0 | 54 | (190) | | | | | | |
| 129 | 670 | 672 | 5:06.7 | -70:32 | 10x16 | 288 | 110 | 3471 | 10C | 347 | .14* | 593 | | LM26 | 10.0 17.0 | 54 | (190) | | | | | | |
| 130 | 670 | 670 | 5:06.7 | -70:32 | 10x16 | 854 | 327 | 11067 | 30C | 369 | .14* | 631 | | LM26 | 10.0 17.0 | 54 | (190) | | | | | | |
| 124 | 769 | 682 | 5:06.9 | -68:28 | 9x6 | 89 | 77 | 312 | 1L | 312 | .16 | 701 | | -- | | | | | | | | | |
| 125 | 770 | 684 | 5:06.9 | -68:28 | 9x7 | 236 | 195 | 1208 | 3L | 403 | .16 | 908 | | -- | | | | | | | | | |
| 129 | 769 | 684 | 5:06.9 | -68:28 | 12x8 | 130 | 67 | 2152 | 10C | 215 | .16 | 398 | | -- | | | | | | | | | |
| 130 | 770 | 682 | 5:06.9 | -68:28 | 18x10 | 419 | 167 | 13800 | 30C | 460 | .16 | 850 | | -- | | | | | | | | | |
| 124 | 808 | 689 | 5:07.0 | -67:39 | 2x2 | 77 | 72 | 18 | 1L | 18 | .09 | 29 | | -- | | | | | | | | | |
| 125 | 810 | 689 | 5:07.0 | -67:39 | 3x2 | 193 | 181 | 50* | 3L | 17 | .09 | 27 | | -- | | | | | | | | | |
| 129 | 809 | 688 | 5:07.0 | -67:39 | 2x2 | 57 | 45 | 45 | 10C | 5 | .09 | 6 | | -- | | | | | | | | | |
| 130 | 809 | 687 | 5:07.0 | -67:39 | 3x4 | 136 | 108 | 214 | 30C | 7 | .09 | 10 | | -- | | | | | | | | | |
| 124 | 723 | 676 | 5:07.1 | -69:26 | 2x2 | 76 | 73 | 10 | 1L | 10 | .16 | 23 | | -- | | | | | | | | | |
| 125 | 724 | 670 | 5:07.1 | -69:26 | 2x2 | 195 | 187 | 25 | 3L | 8 | .16 | 19 | | -- | | | | | | | | | |
| 124 | 551 | 658 | 5:07.2 | -73:06 | 4x5 | 100 | 70 | 272 | 1L | 272 | .05 | 354 | | -- | | | | | | | | | |
| 125 | 553 | 660 | 5:07.2 | -73:06 | 6x6 | 264 | 180 | 1140 | 3L | 380 | .05 | 494 | | -- | | | | | | | | | |
| 129 | 552 | 658 | 5:07.2 | -73:06 | 7x8 | 177 | 30 | 2210 | 10C | 221 | .05 | 267 | | -- | | | | | | | | | |
| 130 | 552 | 655 | 5:07.2 | -73:06 | 8x9 | 505 | 75 | 9100 | 30C | 303 | .05 | 366 | | -- | | | | | | | | | |
| 124 | 735 | 676 | 5:07.2 | -69:08 | 5x5 | 77* | 76 | 29 | 1L | 29 | .16 | 65 | | LM27 | 4.0 3.0 | 6 | (101) | | | | | | |
| 125 | 738 | 679 | 5:07.2 | -69:08 | 5x5 | 198* | 193 | 29 | 3L | 10 | .16 | 23 | | LM27 | 4.0 3.0 | 6 | (101) | | | | | | |
| 129 | 737 | 678 | 5:07.2 | -69:08 | 5x5 | 67 | 65 | 74 | 10C | 7 | .16 | 14 | | LM27 | 4.0 3.0 | 6 | (101) | | | | | | |
| 130 | 737 | 676 | 5:07.2 | -69:08 | 5x5 | 176* | 169 | 143 | 30C | 5 | .16 | 9 | | LM27 | 4.0 3.0 | 6 | (101) | | | | | | |
| 124 | 744 | 677 | 5:07.4 | -69:00 | 2x2 | 79 | 75 | 16 | 1L | 16 | .17 | 38 | | LM27 | | | (101) | | | | | | |
| 125 | 746 | 678 | 5:07.4 | -69:00 | 2x3 | 202 | 192 | 38 | 3L | 13 | .17 | 30 | | LM27 | | | (101) | | | | | | |
| 129 | 744 | 678 | 5:07.4 | -69:00 | 3x2 | 75 | 62 | 55 | 10C | 6 | .17 | 11 | | LM27 | | | (101) | | | | | | |
| 130 | 744 | 676 | 5:07.4 | -69:00 | 4x4 | 195 | 155 | 335 | 30C | 11 | .17 | 21 | | LM27 | | | (101) | | | | | | |

NRL REPORT 8206

| FR. | X | Y | R.A. | DEC. | *X*Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|-------|----------|----|------|-----|-----|------|------|--------|------|-----|-------|-----|-------|---------|---------|---|----|
| 124 | 761 | 677 | 5:07.5 | -68:37 | 4X 5 | 82* 79 | | 22 | 1L | 22 | .15 | 47 | | | | 100 | 5.5 | 0.12 | | | | |
| 125 | 762 | 678 | 5:07.5 | -68:37 | 4X 5 | 198* 197 | | 40 | 3L | 13 | .15 | 29 | | | | 100 | 5.5 | 0.19 | | | | |
| 129 | 760 | 678 | 5:07.5 | -68:37 | 4X 5 | 70* 73 | | 23 | 10C | 2 | .15 | 4 | | | | 100 | 5.5 | 1.34 | | | | |
| 130 | 761 | 675 | 5:07.5 | -68:37 | 4X 5 | 174* 184 | | 66 | 30C | 2 | .15 | 4 | | | | 100 | 5.5 | 1.4 | | | | |
| 124 | 732 | 673 | 5:07.8 | -69:13 | 2X 2 | 78* 77 | | 3 | 1L | 3 | .16 | 7 | (LM27) | | | 101 | 0.0 | 0.00* | | | | |
| 125 | 735 | 678 | 5:07.8 | -69:13 | 2X 2 | 192* 192 | | 3 | 3L | 1 | .16 | 2 | (LM27) | | | 101 | 0.0 | 0.01* | | | | |
| 129 | 735 | 676 | 5:07.8 | -69:13 | 2X 2 | 73 70 | | 4 | 10C | 0 | .16 | 1 | (LM27) | | | 101 | 0.0 | 0.03* | | | | |
| 130 | 735 | 674 | 5:07.8 | -69:13 | 2X 2 | 196 190 | | 15 | 30C | 1 | .16 | 1 | (LM27) | | | 101 | 0.0 | 0.02 | | | | |
| 129 | 841 | 689 | 5:07.9 | -68:59 | 2X 2 | 50 44 | | 21 | 10C | 2 | .13 | 3 | | | | | | | | | | -- |
| 130 | 842 | 687 | 5:07.9 | -68:59 | 2X 2 | 120 110 | | 37 | 30C | 1 | .13 | 2 | | | | | | | | | | -- |
| 124 | 605 | 659 | 5:08.0 | -71:57 | 5X 5 | 139 70 | | 582 | 1L | 582 | .12 | 1083 | | | | | | | | | | -- |
| 125 | 607 | 661 | 5:08.0 | -71:57 | 6X 5 | 404 178 | | 1930 | 3L | 643 | .12 | 1197 | | | | | | | | | | -- |
| 129 | 606 | 660 | 5:08.0 | -71:57 | 5X 5 | 246 33 | | 1763 | 10C | 176 | .12 | 280 | | | | | | | | | | -- |
| 130 | 607 | 658 | 5:08.0 | -71:57 | 6X 7 | 425 80 | | 4310 | 30C | 144 | .12 | 228 | | | | | | | | | | -- |
| 124 | 639 | 662 | 5:08.1 | -71:11 | 6X 5 | 89 78 | | 120 | 1L | 120 | .12* | 223 | LM28 | 5.0 | 4.0 | 13 | | | 1848 | | | |
| 125 | 640 | 664 | 5:08.1 | -71:11 | 6X 5 | 241 204 | | 303 | 3L | 101 | .12* | 188 | LM28 | 5.0 | 4.0 | 13 | | | 1848 | | | |
| 129 | 639 | 662 | 5:08.1 | -71:11 | 6X 5 | 125 72 | | 462 | 10C | 46 | .12* | 74 | LM28 | 5.0 | 4.0 | 13 | | | 1848 | | | |
| 130 | 640 | 660 | 5:08.1 | -71:11 | 6X 5 | 385* 191 | | 1602 | 30C | 53 | .12* | 85 | LM28 | 5.0 | 4.0 | 13 | | | 1848 | | | |
| 124 | 646 | 662 | 5:08.2 | -71:05 | 3X 2 | 76 73 | | 13 | 1L | 13 | .12 | 24 | -- | | | | | | 1848? | | | |
| 125 | 646 | 665 | 5:08.2 | -71:05 | 2X 3 | 196 185 | | 60 | 3L | 20 | .12 | 37 | -- | | | | | | 1848? | | | |
| 129 | 646 | 663 | 5:08.2 | -71:05 | 2X 2 | 58 41 | | 64 | 10C | 6 | .12 | 10 | -- | | | | | | 1848? | | | |
| 130 | 647 | 660 | 5:08.2 | -71:05 | 3X 3 | 149 101 | | 207 | 30C | 7 | .12 | 11 | -- | | | | | | 1848? | | | |
| 124 | 695 | 667 | 5:08.3 | -70:01 | 6X 4* | 80 76 | | 32 | 1L | 32 | .15 | 69 | LM29 | 5.0 | 2.0 | 5 | | | | | | |
| 125 | 695 | 668 | 5:08.3 | -70:01 | 6X 4* | 204 196 | | 59 | 3L | 20 | .15 | 43 | LM29 | 5.0 | 2.0 | 5 | | | | | | |
| 129 | 694 | 666 | 5:08.3 | -70:01 | 6X 4* | 68 59 | | 85 | 10C | 9 | .15 | 15 | LM29 | 5.0 | 2.0 | 5 | | | | | | |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | MA | M1 | MCC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|----|-------|---------|-----|------|-----|------|-----|-----|--------|------|-----|-------|-------|------|---------|---------|---|----|
| 130 | 695 | 665 | 5:08.3 | -70:01 | 6x | 4+164 | 145 | | 163 | 30C | 5 | .15 | 10 | LM29 | 5.0 | 2.0 | 5 | | | | | | |
| 124 | 735 | 671 | 5:08.4 | -69:13 | 4x | 4 | 78 | 76 | 11 | 11 | .16 | | 25 | L 0 | 2.0 | 2.0 | -- | | | | | | |
| 125 | 733 | 670 | 5:08.4 | -69:13 | 4x | 4 | 205+201 | | 45 | 3L | 15 | .16 | 34 | LM30 | 2.0 | 2.0 | -- | | | | | | |
| 129 | 733 | 670 | 5:08.4 | -69:13 | 4x | 4 | 74 | 67 | 37 | 10C | 4 | .16 | 7 | LM30 | 2.0 | 2.0 | -- | | | | | | |
| 130 | 734 | 670 | 5:08.4 | -69:13 | 4x | 4 | 183+173 | | 46 | 30C | 2 | .16 | 3 | LM30 | 2.0 | 2.0 | -- | | | | | | |
| 124 | 755 | 671 | 5:09.2 | -68:50 | 7x | 5 | 101 | 96 | 122 | 11 | 122 | .16 | 274 | | | | 10348 | 104.3 | 0.38 | | | | |
| 125 | 756 | 672 | 5:09.2 | -68:50 | 7x | 5 | 279 | 226 | 500 | 3L | 167 | .16 | 375 | | | | 10348 | 104.3 | 0.28 | | | | |
| 129 | 755 | 672 | 5:09.2 | -68:50 | 7x | 5 | 245 | 112 | 976 | 10C | 98 | .16 | 190 | | | | 10348 | 104.3 | 0.58 | | | | |
| 130 | 755 | 670 | 5:09.2 | -68:50 | 7x | 5 | 682 | 321 | 3275 | 30C | 1094 | .16 | 202 | | | | 10348 | 104.3 | 0.52 | | | | |
| 129 | 723 | 667 | 5:09.4 | -69:31 | 3x | 2 | 55 | 45 | 52 | 10C | 5 | .16 | 10 | | | | | | | | -- | | |
| 130 | 723 | 665 | 5:09.4 | -69:31 | 4x | 3 | 136 | 109 | 210 | 30C | 7 | .16 | 13 | | | | | | | | -- | | |
| 124 | 769 | 668 | 5:09.7 | -68:33 | 4x | 5 | 80 | 78 | 18 | 11 | 18 | .15 | 39 | | | | 104AB | 11.4 | 0.29 | | | | |
| 125 | 768 | 670 | 5:09.7 | -68:33 | 4x | 5 | 205 | 200 | 50 | 3L | 17 | .15 | 36 | | | | 104AB | 11.4 | 0.32 | | | | |
| 129 | 769 | 670 | 5:09.7 | -68:33 | 4x | 5 | 81 | 71 | 84 | 10C | 8 | .15 | 15 | | | | 104AB | 11.4 | 0.74 | | | | |
| 130 | 769 | 668 | 5:09.7 | -68:33 | 4x | 5 | 231 | 189 | 228 | 30C | 8 | .15 | 14 | | | | 104AB | 11.4 | 0.84 | | | | |
| 124 | 748 | 665 | 5:10.1 | -68:58 | 7x | 7 | 101 | 84 | 237 | 11 | 237 | .16 | 533 | (LM31) | | | 105.A | 122.7 | 0.23 | 1858 | | | |
| 125 | 748 | 666 | 5:10.1 | -68:58 | 7x | 7 | 255+217 | | 726 | 3L | 242 | .16 | 545 | (LM31) | | | 105.A | 122.7 | 0.23 | 1858 | | | |
| 129 | 749 | 665 | 5:10.1 | -68:58 | 7x | 7 | 228 | 96 | 1384 | 10C | 138 | .16 | 256 | (LM31) | | | 105.A | 122.7 | 0.48 | 1858 | | | |
| 130 | 749 | 663 | 5:10.1 | -68:58 | 7x | 7 | 682 | 270 | 4662 | 30C | 1554 | .16 | 288 | (LM31) | | | 105.A | 122.7 | 0.43 | 1858 | | | |
| 124 | 748 | 665 | 5:10.1 | -68:54 | 5x | 4 | 101 | 91 | 68 | 11 | 68 | .16 | 153 | LM31 | 4.0 | 2.0 | 2 | (105) | | | 1858 | | |
| 125 | 750 | 666 | 5:10.1 | -68:54 | 5x | 4 | 284 | 243 | 255 | 3L | 85 | .16 | 191 | LM31 | 4.0 | 2.0 | 2 | (105) | | | 1858 | | |
| 129 | 749 | 665 | 5:10.1 | -68:54 | 5x | 4 | 228 | 134 | 544 | 10C | 54 | .16 | 100 | LM31 | 4.0 | 2.0 | 2 | (105) | | | 1858 | | |
| 130 | 750 | 663 | 5:10.1 | -68:54 | 5x | 4 | 619+411 | | 1420 | 30C | 474 | .16 | 87 | LM31 | 4.0 | 2.0 | 2 | (105) | | | 1858 | | |
| 124 | 628 | 653 | 5:10.2 | -71:29 | 2x | 2 | 79 | 72 | 25 | 11 | 25 | .12 | 46 | | | | | | | | -- | | |
| 125 | 630 | 655 | 5:10.2 | -71:29 | 5x | 2 | 198 | 185 | 89 | 3L | 30 | .12 | 55 | | | | | | | | -- | | |

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| FP. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LM NO. | SIZE | BS | N NO. | HA | HI | NCC NO. | SAD NO. | M | SP |
|-----|-----|-----|--------|--------|----|----|-----|-----|------|-----|-----|-----|-----|--------|------|-----|-------|---------|-----|---------|---------|---|----|
| 129 | 629 | 655 | 5:10.2 | -71:29 | 3X | 4 | 52 | 38 | 133 | 100 | 13 | .12 | 21 | | | | | | | | | | |
| 130 | 630 | 652 | 5:10.2 | -71:29 | 7X | 6 | 133 | 89 | 923 | 300 | 31 | .12 | 49 | | | | | | | | | | |
| 124 | 923 | 685 | 5:10.4 | -65:25 | 2X | 2 | 74 | 71 | 10 | 1L | 10 | .13 | 20 | | | | | | | | | | |
| 125 | 923 | 687 | 5:10.4 | -65:25 | 2X | 2 | 189 | 181 | 26 | 3L | 9 | .13 | 17 | | | | | | | | | | |
| 129 | 923 | 687 | 5:10.4 | -65:25 | 6X | 5 | 59 | 45 | 260 | 100 | 26 | .13 | 43 | | | | | | | | | | |
| 130 | 922 | 685 | 5:10.4 | -65:25 | 9X | 8 | 143 | 105 | 1470 | 300 | 49 | .13 | 81 | | | | | | | | | | |
| 124 | 690 | 659 | 5:10.6 | -70:14 | 2X | 6 | 78 | 75 | 24 | 1L | 24 | .15 | 52 | | | | | | | | | | |
| 125 | 689 | 657 | 5:10.6 | -70:14 | 6X | 5 | 204 | 187 | 291 | 3L | 97 | .15 | 209 | | | | | | | | | | |
| 129 | 687 | 658 | 5:10.6 | -70:14 | 4X | 2 | 57 | 42 | 84 | 100 | 8 | .15 | 15 | | | | | | | | | | |
| 130 | 688 | 655 | 5:10.6 | -70:14 | 7X | 5 | 144 | 102 | 520 | 300 | 17 | .15 | 30 | | | | | | | | | | |
| 124 | 832 | 673 | 5:10.7 | -67:10 | 5X | 8 | 86 | 79 | 82 | 1L | 82 | .11 | 145 | LH32 | 4.0 | 7.0 | 10 | (26.27) | | | | | |
| 125 | 834 | 674 | 5:10.7 | -67:10 | 5X | 8 | 221 | 208 | 126 | 3L | 42 | .11 | 74 | LH32 | 4.0 | 7.0 | 10 | (26.27) | | | | | |
| 129 | 833 | 673 | 5:10.7 | -67:10 | 5X | 8 | 103 | 79 | 211 | 100 | 21 | .11 | 32 | LH32 | 4.0 | 7.0 | 10 | (26.27) | | | | | |
| 130 | 834 | 672 | 5:10.7 | -67:10 | 5X | 8 | 314 | 211 | 1145 | 300 | 38 | .11 | 59 | LH32 | 4.0 | 7.0 | 10 | (26.27) | | | | | |
| 124 | 720 | 657 | 5:10.8 | -69:31 | 3X | 3 | 75 | 75 | 2 | 1L | 2 | .16 | 5 | | | | | 108 | 1.6 | 0.35* | | | |
| 125 | 721 | 659 | 5:10.8 | -69:31 | 3X | 3 | 186 | 187 | 1 | 3L | 0 | .16 | 1 | | | | | 108 | 1.6 | 2.13* | | | |
| 129 | 724 | 657 | 5:10.8 | -69:31 | 3X | 3 | 59 | 59 | 1 | 100 | 0 | .16 | 0 | | | | | 108 | 1.6 | 8.7* | | | |
| 130 | 724 | 655 | 5:10.8 | -69:31 | 3X | 3 | 147 | 145 | 3 | 300 | 0 | .16 | 0 | | | | | 108 | 1.6 | 8.7* | | | |
| 124 | 832 | 673 | 5:10.8 | -67:10 | 5X | 5 | 86 | 80 | 54 | 1L | 54 | .11 | 96 | (LH32) | | | | 26.27 | 5.0 | 0.05 | | | |
| 125 | 834 | 674 | 5:10.8 | -67:10 | 5X | 5 | 221 | 210 | 71 | 3L | 24 | .11 | 42 | (LH32) | | | | 26.27 | 5.0 | 0.12 | | | |
| 129 | 833 | 673 | 5:10.8 | -67:10 | 5X | 5 | 103 | 83 | 157 | 100 | 16 | .11 | 24 | (LH32) | | | | 26.27 | 5.0 | 0.21 | | | |
| 130 | 834 | 672 | 5:10.8 | -67:10 | 5X | 5 | 314 | 236 | 620 | 300 | 21 | .11 | 32 | (LH32) | | | | 26.27 | 5.0 | 0.16 | | | |
| 124 | 702 | 656 | 5:10.9 | -69:56 | 2X | 2 | 76 | 73 | 9 | 1L | 9 | .15 | 19 | | | | | | | | | | -- |
| 125 | 701 | 658 | 5:10.9 | -69:56 | 4X | 1 | 193 | 185 | 28 | 3L | 9 | .15 | 20 | | | | | | | | | | -- |
| 129 | 702 | 658 | 5:10.9 | -69:56 | 2X | 2 | 58 | 40 | 67 | 100 | 7 | .15 | 10 | | | | | | | | | | -- |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BO | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | MGC NO. | SAG NO. | M | SP |
|-----|-----|-----|--------|--------|-------|-----|-----|-----|------|-----|-----|-----|-----|--------|------|-----|--------|------|------|---------|---------|----|----|
| 130 | 703 | 656 | 5:10.9 | -69:56 | 3x | 4 | 145 | 95 | 282 | 30C | 9 | .15 | 17 | | | | | | | | | | |
| 124 | 736 | 658 | 5:11.4 | -69:10 | 4x | 7 | 83 | 81 | 23 | 1L | 23 | .16 | 52 | LH33 | 2.0 | 6.0 | 11 | | | | | | |
| 125 | 737 | 658 | 5:11.4 | -69:10 | 4x | 7 | 215 | 209 | 31 | 3L | 10 | .16 | 23 | LH33 | 2.0 | 6.0 | 11 | | | | | | |
| 129 | 737 | 657 | 5:11.4 | -69:10 | 4x | 7 | 92 | 79 | 110 | 10C | 11 | .16 | 20 | LH33 | 2.0 | 6.0 | 11 | | | | | | |
| 130 | 738 | 656 | 5:11.4 | -69:10 | 4x | 7 | 241 | 214 | 352 | 30C | 12 | .16 | 22 | LH33 | 2.0 | 6.0 | 11 | | | | | | |
| 124 | 827 | 661 | 5:12.7 | -67:18 | 12x | 6 | 83 | 83 | 153 | 1L | 153 | .11 | 270 | LH34 | 16.0 | 3.0 | 22 | (30) | | | | | |
| 125 | 828 | 663 | 5:12.7 | -67:18 | 12x | 6 | 224 | 219 | 138 | 3L | 46 | .11 | 81 | LH34 | 16.0 | 3.0 | 22 | (30) | | | | | |
| 129 | 826 | 659 | 5:12.7 | -67:18 | 12x | 6 | 159 | 104 | 1177 | 10C | 118 | .11 | 180 | LH34 | 16.0 | 3.0 | 22 | (30) | | | | | |
| 130 | 827 | 657 | 5:12.7 | -67:18 | 12x | 6 | 505 | 337 | 1712 | 30C | 57 | .11 | 87 | LH34 | 16.0 | 3.0 | 22 | (30) | | | | | |
| 124 | 678 | 644 | 5:13.0 | -70:28 | 3x | 3 | 80 | 78 | 8 | 1L | 8 | .14 | 16 | | | | 193A-E | 4.8 | 0.30 | | | | |
| 125 | 679 | 646 | 5:13.0 | -70:28 | 3x | 3 | 198 | 194 | 9 | 3L | 3 | .14 | 6 | | | | 193A-E | 4.8 | 0.78 | | | | |
| 129 | 679 | 646 | 5:13.0 | -70:28 | 3x | 3 | 54 | 48 | 21 | 10C | 2 | .14 | 4 | | | | 193A-E | 4.8 | 1.3 | | | | |
| 130 | 679 | 643 | 5:13.0 | -70:28 | 3x | 3 | 130 | 118 | 42 | 30C | 1 | .14 | 2 | | | | 193A-E | 4.8 | 2.0 | | | | |
| 125 | 752 | 650 | 5:13.1 | -68:55 | 2x | 2 | 204 | 193 | 42 | 3L | 14 | .17 | 33 | | | | | | 1866 | | | | |
| 124 | 919 | 671 | 5:13.1 | -65:28 | 2x | 2 | 73 | 71 | 5 | 1L | 5 | .15 | 11 | -- | | | | | | 1866 | | | |
| 125 | 922 | 673 | 5:13.1 | -65:28 | 2x | 2 | 189 | 181 | 26 | 3L | 9 | .15 | 19 | -- | | | | | | 1866 | | | |
| 129 | 921 | 673 | 5:13.1 | -65:28 | 4x | 3 | 58 | 46 | 92 | 10C | 9 | .15 | 16 | -- | | | | | | 1866 | | | |
| 130 | 921 | 671 | 5:13.1 | -65:28 | 4x | 5 | 145 | 107 | 408 | 30C | 14 | .15 | 25 | -- | | | | | | 1866 | | | |
| 124 | 932 | 674 | 5:13.2 | -65:17 | 6x | 5 | 80 | 71 | 150 | 1L | 150 | .05 | 195 | | | | | | | 249221 | 8.5 | 88 | |
| 125 | 932 | 675 | 5:13.2 | -65:17 | 9x | 7 | 208 | 180 | 792 | 3L | 264 | .05 | 344 | | | | | | | 249221 | 8.5 | 88 | |
| 129 | 932 | 675 | 5:13.2 | -65:17 | 8x | 9 | 109 | 45 | 1971 | 10C | 197 | .05 | 238 | | | | | | | 249221 | 8.5 | 88 | |
| 130 | 932 | 673 | 5:13.2 | -65:17 | 10x10 | 342 | 108 | | 7200 | 30C | 240 | .05 | 290 | | | | | | | 249221 | 8.5 | 88 | |
| 124 | 705 | 646 | 5:13.3 | -69:53 | 2x | 2 | 77 | 74 | 10 | 1L | 10 | .15 | 22 | | | | | | | -- | | | |
| 125 | 705 | 646 | 5:13.3 | -69:53 | 2x | 2 | 192 | 186 | 22 | 3L | 7 | .15 | 16 | | | | | | | -- | | | |
| 129 | 704 | 647 | 5:13.3 | -69:53 | 2x | 2 | 45 | 38 | 23 | 10C | 2 | .15 | 4 | | | | | | | -- | | | |

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| FR | X | Y | R.A. | DEC. | *X | *Y | P | BQ | V | E.F | V/E | RE | UF | LM NO. | SIZE | B5 | N NO. | HA | H1 | NOC NO. | SAC NO. | M | SP |
|-----|-----|-----|--------|--------|-----|----|-----|-----|------|------|-----|-----|------|-----------------|----------|------|---------|-------|------|---------|---------|---|---------|
| 130 | 724 | 644 | 5:13.3 | -69:53 | 2X | 2 | 110 | 91 | 59 | 30C | 2 | .15 | 4 | | | | | | | | | | |
| 124 | 731 | 647 | 5:13.5 | -69:21 | 5X | 7 | 99 | 92 | 79 | 1L | 79 | .16 | 178 | LM35 | 3.0 | 6.0 | 10 | (113) | | | | | 1874-B1 |
| 125 | 732 | 649 | 5:13.5 | -69:21 | 5X | 7 | 255 | 254 | 169 | 3L | 56 | .16 | 126 | LM35 | 3.0 | 6.0 | 10 | (113) | | | | | 1874-B1 |
| 129 | 731 | 647 | 5:13.5 | -69:21 | 5X | 7 | 233 | 157 | 604 | 10C | 60 | .16 | 112 | LM35 | 3.0 | 6.0 | 10 | (113) | | | | | 1874-B1 |
| 130 | 730 | 645 | 5:13.5 | -69:21 | 5X | 7 | 730 | 445 | 2547 | 30C | 85 | .16 | 157 | LM35 | 3.0 | 6.0 | 10 | (113) | | | | | 1874-B1 |
| 124 | 825 | 657 | 5:13.6 | -67:22 | 106 | | | 98 | 81 | 509 | 1L | 509 | .11 | 900 | LM34--38 | 64.0 | 45 | (30) | | | | | 1869.71 |
| 125 | 826 | 659 | 5:13.6 | -67:22 | 102 | | | 259 | 218 | 871 | 3L | 290 | .11 | 513 | LM34--38 | 64.0 | 45 | (30) | | | | | 1869.71 |
| 129 | 826 | 653 | 5:13.6 | -67:22 | 124 | | | 79 | 88 | 451 | 10C | 45 | .11 | 69 | LM34--38 | 64.0 | 45 | (30) | | | | | 1869.71 |
| 130 | 824 | 653 | 5:13.6 | -67:22 | 122 | | | 342 | 193 | 7563 | 30C | 252 | .11 | 386 | LM34--38 | 64.0 | 45 | (30) | | | | | 1869.71 |
| 124 | 734 | 646 | 5:13.7 | -69:15 | 3X | 3 | 84 | 84 | | 1L | 1 | .16 | 2 | | | | 112 | 3.3 | 1.47 | | | | |
| 125 | 735 | 647 | 5:13.7 | -69:15 | 3X | 3 | 224 | 230 | -18 | 3L | -6 | .16 | -- | | | | 112 | 3.3 | -- | | | | |
| 129 | 735 | 646 | 5:13.7 | -69:15 | 3X | 3 | 77 | 87 | -29 | 10C | -3 | .16 | -- | | | | 112 | 3.3 | -- | | | | |
| 130 | 735 | 644 | 5:13.7 | -69:15 | 3X | 3 | 274 | 261 | -155 | 30C | -5 | .16 | -- | | | | 112 | 3.3 | -- | | | | |
| 124 | 729 | 646 | 5:13.8 | -69:24 | 10X | 7 | 111 | 86 | 446 | 1L | 446 | .16 | 1003 | (LM35) | | | 113.A-F | 307.5 | 0.31 | 1874-B1 | | | |
| 125 | 729 | 647 | 5:13.8 | -69:24 | 10X | 7 | 308 | 238 | 1120 | 3L | 373 | .16 | 839 | (LM35) | | | 113.A-F | 307.5 | 0.37 | 1874-B1 | | | |
| 129 | 729 | 646 | 5:13.8 | -69:24 | 10X | 7 | 294 | 95 | 3554 | 10C | 355 | .16 | 657 | (LM35) | | | 113.A-F | 307.5 | 0.47 | 1874-B1 | | | |
| 130 | 728 | 644 | 5:13.8 | -69:24 | 10X | 7 | 660 | 289 | 8649 | 30C | 288 | .16 | 533 | (LM35) | | | 113.A-F | 307.5 | 0.58 | 1874-B1 | | | |
| 124 | 821 | 656 | 5:13.8 | -67:28 | 10X | 8 | 85 | 81 | 169 | 1L | 169 | .11 | 299 | (LM34,36,37,38) | | | 30.A-D | 90.7 | 0.30 | 1869.71 | | | |
| 125 | 822 | 658 | 5:13.8 | -67:28 | 10X | 8 | 228 | 216 | 385 | 3L | 128 | .11 | 226 | (LM34,36,37,38) | | | 30.A-D | 90.7 | 0.40 | 1869.71 | | | |
| 129 | 821 | 655 | 5:13.8 | -67:28 | 10X | 8 | 93 | 80 | 937 | 10C | 94 | .11 | 143 | (LM34,36,37,38) | | | 30.A-D | 90.7 | 0.63 | 1869.71 | | | |
| 130 | 819 | 652 | 5:13.8 | -67:28 | 10X | 8 | 159 | 163 | 1919 | 30C | 64 | .11 | 98 | (LM34,36,37,38) | | | 30.A-D | 90.7 | 0.93 | 1869.71 | | | |
| 124 | 821 | 656 | 5:13.8 | -67:27 | 4X | 5 | 85 | 84 | 21 | 1L | 21 | .14 | 43 | LM38 | 2.0 | 3.0 | 8 | (30) | | | | | 1871 |
| 125 | 822 | 658 | 5:13.8 | -67:27 | 4X | 5 | 228 | 222 | 71 | 3L | 27 | .14 | 55 | LM38 | 2.0 | 3.0 | 8 | (30) | | | | | 1871 |
| 129 | 823 | 650 | 5:13.8 | -67:27 | 4X | 5 | 52 | 54 | -26 | 10C | -3 | .14 | -- | LM38 | 2.0 | 3.0 | 8 | (30) | | | | | 1871 |
| 130 | 820 | 652 | 5:13.8 | -67:27 | 4X | 5 | 177 | 175 | -84 | 30C | -3 | .14 | -- | LM38 | 2.0 | 3.0 | 8 | (30) | | | | | 1871 |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NOC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|----|----|-----|-----|------|-----|-----|-----|-----|--------|------|-----|-------|-------|------|---------|---------|---|----|
| 124 | 824 | 656 | 5:13.8 | -67:23 | 4X | 4 | 96 | 91 | 12 | 1L | 12 | .11 | 21 | LH37 | 2.0 | 2.0 | 6 | (30) | | 1869 | | | |
| 125 | 826 | 658 | 5:13.8 | -67:23 | 4X | 4 | 269 | 249 | 31 | 3L | 10 | .11 | 18 | LH37 | 2.0 | 2.0 | 6 | (30) | | 1869 | | | |
| 129 | 827 | 652 | 5:13.8 | -67:23 | 4X | 4 | 58 | 58 | -22 | 10C | -2 | .11 | -- | LH37 | 2.0 | 2.0 | 6 | (30) | | 1869 | | | |
| 130 | 823 | 652 | 5:13.8 | -67:23 | 4X | 4 | 233 | 249 | 187 | 30C | 6 | .11 | 10 | LH37 | 2.0 | 2.0 | 6 | (30) | | 1869 | | | |
| 124 | 827 | 656 | 5:13.8 | -67:20 | 4X | 5 | 93 | 88 | 9 | 1L | 9 | .08 | 114 | LH36 | 2.0 | 3.0 | 9 | (30) | | | | | |
| 125 | 828 | 658 | 5:13.8 | -67:20 | 4X | 5 | 260 | 243 | 32 | 3L | 11 | .08 | 17 | LH36 | 2.0 | 3.0 | 9 | (30) | | | | | |
| 129 | 829 | 652 | 5:13.8 | -67:20 | 4X | 5 | 54 | 59 | -50 | 10C | -5 | .08 | -- | LH36 | 2.0 | 3.0 | 9 | (30) | | | | | |
| 130 | 826 | 652 | 5:13.8 | -67:20 | 4X | 5 | 277 | 312 | -153 | 30C | -5 | .08 | -- | LH36 | 2.0 | 3.0 | 9 | (30) | | | | | |
| 129 | 749 | 648 | 5:13.9 | -68:59 | 2X | 2 | 54 | 50 | 16 | 10C | 2 | .17 | 3 | | | | | | | -- | | | |
| 130 | 749 | 646 | 5:13.9 | -68:59 | 2X | 2 | 137 | 127 | 38 | 30C | 1 | .17 | 6 | | | | | | | -- | | | |
| 124 | 834 | 655 | 5:14.1 | -67:11 | 3X | 4 | 81 | 74 | 65 | 1L | 65 | .10 | 109 | | | | (30) | | | | | | |
| 125 | 835 | 658 | 5:14.1 | -67:11 | 4X | 6 | 215 | 198 | 232 | 3L | 77 | .10 | 129 | | | | (30) | | | | | | |
| 129 | 834 | 658 | 5:14.1 | -67:11 | 6X | 6 | 90 | 61 | 649 | 10C | 65 | .10 | 95 | | | | (30) | | | | | | |
| 130 | 835 | 656 | 5:14.1 | -67:11 | 7X | 8 | 252 | 163 | 1890 | 30C | 63 | .10 | 93 | | | | (30) | | | | | | |
| 124 | 721 | 641 | 5:14.3 | -69:31 | 4X | 7 | 86 | 84 | 40 | 1L | 40 | .15 | 86 | LH39 | 2.0 | 6.0 | 10 | (114) | | | | | |
| 125 | 723 | 644 | 5:14.3 | -69:31 | 4X | 7 | 245 | 224 | 148 | 3L | 49 | .15 | 106 | LH39 | 2.0 | 6.0 | 10 | (114) | | | | | |
| 129 | 721 | 644 | 5:14.3 | -69:31 | 4X | 7 | 136 | 92 | 310 | 10C | 31 | .15 | 55 | LH39 | 2.0 | 6.0 | 10 | (114) | | | | | |
| 130 | 722 | 641 | 5:14.3 | -69:31 | 4X | 7 | 394 | 265 | 892 | 30C | 30 | .15 | 53 | LH39 | 2.0 | 6.0 | 10 | (114) | | | | | |
| 124 | 870 | 657 | 5:14.8 | -66:29 | 3X | 3 | 76 | 75 | 5 | 1L | 5 | .09 | 8 | | | | 31 | 1.0 | 0.12 | | | | |
| 125 | 871 | 659 | 5:14.8 | -66:29 | 3X | 3 | 193 | 188 | 13 | 3L | 4 | .09 | 7 | | | | 31 | 1.0 | 0.15 | | | | |
| 129 | 870 | 659 | 5:14.8 | -66:29 | 3X | 3 | 61 | 56 | 24 | 10C | 2 | .09 | 3 | | | | 31 | 1.0 | 0.3 | | | | |
| 130 | 870 | 656 | 5:14.8 | -66:29 | 3X | 3 | 159 | 144 | 56 | 30C | 2 | .09 | 3 | | | | 31 | 1.0 | 0.39 | | | | |
| 124 | 719 | 638 | 5:14.9 | -69:34 | 9X | 7 | 83 | 81 | 45 | 1L | 45 | .15 | 97 | (LH39) | | | 114,A | 159.1 | 1.64 | | | | |
| 125 | 722 | 642 | 5:14.9 | -69:34 | 9X | 7 | 224 | 219 | 92 | 3L | 31 | .15 | 67 | (LH39) | | | 114,A | 159.1 | 2.38 | | | | |
| 129 | 720 | 642 | 5:14.9 | -69:34 | 9X | 7 | 98 | 81 | 378 | 10C | 38 | .15 | 67 | (LH39) | | | 114,A | 159.1 | 2.36 | | | | |

NRL REPORT 8206

| FR. | X | Y | P.A. | DEC. | X*Y | P | BO | V | E.F | V/E | ME | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NOC NO. | SAC NO. | M | SP |
|-----|-----|-----|--------|--------|------|---------|------|-----|-----|-----|-----|--------|--------|-------|-------|-------|------|-------|---------|---------|----|----|
| 130 | 721 | 639 | 5:14.9 | -69:34 | 9X 7 | 203*234 | 404 | 30C | 13 | .15 | 24 | (LM39) | 114.A | 159.1 | 6.64 | -- | -- | -- | -- | -- | -- | -- |
| 124 | 793 | 641 | 5:15.9 | -68:02 | 2X 2 | 74* 74 | -1 | 1L | -1 | .20 | -- | -- | 32 | 0.3 | -- | 32 | 0.3 | -- | -- | -- | -- | -- |
| 125 | 794 | 643 | 5:15.9 | -68:02 | 2X 2 | 109*109 | 2 | 3L | 1 | .20 | 2 | 2 | 32 | 0.3 | 0.16* | 32 | 0.3 | 0.16* | -- | -- | -- | -- |
| 129 | 794 | 642 | 5:15.9 | -68:02 | 2X 2 | 44* 44 | 4 | 10C | 0 | .20 | 1 | 1 | 32 | 0.3 | 0.35* | 32 | 0.3 | 0.35* | -- | -- | -- | -- |
| 130 | 794 | 640 | 5:15.9 | -68:02 | 2X 2 | 102*102 | 4 | 30C | 0 | .20 | 0 | 0 | 32 | 0.3 | 1.04* | 32 | 0.3 | 1.04* | -- | -- | -- | -- |
| 124 | 624 | 630 | 5:16.0 | -71:30 | 2X 2 | 74 74 | 11 | 1L | 11 | .15 | 24 | 24 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 125 | 626 | 628 | 5:16.0 | -71:30 | 3X 3 | 103 179 | 10 | 3L | 6 | .15 | 13 | 13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 129 | 623 | 631 | 5:16.0 | -71:30 | 2X 2 | 37 31 | 26 | 10C | 3 | .15 | 5 | 5 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 130 | 623 | 628 | 5:16.0 | -71:30 | 2X 2 | 87 75 | 40 | 30C | 1 | .15 | 2 | 2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 124 | 613 | 629 | 5:16.5 | -71:50 | 2X 2 | 75* 75 | 0 | 1L | 0 | .15 | -- | -- | 194 | 0.4 | -- | 194 | 0.4 | -- | -- | -- | -- | -- |
| 125 | 614 | 630 | 5:16.5 | -71:50 | 2X 2 | 106*106 | 1 | 3L | 0 | .15 | 1 | 1 | 194 | 0.4 | 0.56* | 194 | 0.4 | 0.56* | -- | -- | -- | -- |
| 129 | 614 | 628 | 5:16.5 | -71:50 | 2X 2 | 34* 33 | 1 | 10C | 0 | .15 | 0 | 0 | 194 | 0.4 | 2.25* | 194 | 0.4 | 2.25* | -- | -- | -- | -- |
| 130 | 614 | 626 | 5:16.5 | -71:50 | 2X 2 | 79* 78 | 7 | 30C | 0 | .15 | 0 | 0 | 194 | 0.4 | 1.01* | 194 | 0.4 | 1.01* | -- | -- | -- | -- |
| 124 | 672 | 628 | 5:16.7 | -70:37 | 2X 5 | 80 73 | 57 | 1L | 57 | .12 | 106 | 106 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 125 | 673 | 630 | 5:16.7 | -70:37 | 5X 5 | 202 187 | 103 | 3L | 61 | .12 | 113 | 113 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 129 | 673 | 630 | 5:16.7 | -70:37 | 4X 4 | 64 38 | 194 | 10C | 19 | .12 | 31 | 31 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 130 | 673 | 627 | 5:16.7 | -70:37 | 7X 5 | 163 92 | 1020 | 30C | 34 | .12 | 54 | 54 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 125 | 821 | 643 | 5:16.8 | -67:31 | 3X 2 | 201 189 | 56 | 3L | 19 | .14 | 38 | 38 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 129 | 819 | 643 | 5:16.8 | -67:31 | 3X 2 | 60 48 | 66 | 10C | 7 | .14 | 11 | 11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 130 | 820 | 640 | 5:16.8 | -67:31 | 4X 3 | 141 107 | 232 | 30C | 8 | .14 | 13 | 13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 124 | 825 | 640 | 5:16.9 | -67:23 | 3X 3 | 77* 75 | 9 | 1L | 9 | .13 | 18 | 18 | 33 | 10.5 | 0.60* | 33 | 10.5 | 0.60* | -- | -- | -- | -- |
| 125 | 826 | 642 | 5:16.9 | -67:23 | 3X 3 | 106*107 | -2 | 3L | -1 | .13 | -- | -- | 33 | 10.5 | -- | 33 | 10.5 | -- | -- | -- | -- | -- |
| 129 | 825 | 642 | 5:16.9 | -67:23 | 3X 3 | 46* 47 | 1 | 10C | 0 | .13 | 0 | 0 | 33 | 10.5 | -- | 33 | 10.5 | -- | -- | -- | -- | -- |
| 130 | 826 | 640 | 5:16.9 | -67:23 | 3X 3 | 113*114 | 0 | 30C | 0 | .13 | -- | -- | 33 | 10.5 | -- | 33 | 10.5 | -- | -- | -- | -- | -- |
| 124 | 702 | 627 | 5:17.3 | -69:57 | 3X 3 | 78* 77 | 3 | 1L | 3 | .14 | 6 | 6 | 116 | 1.9 | 0.31* | 116 | 1.9 | 0.31* | -- | -- | -- | -- |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BQ | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NOC NO. | SAC NO. | M | SP |
|-----|-----|-----|--------|--------|----|----|----------|----|-----|-----|-----|-----|-----|--------|------|----|-----------|-----|-------|---------|---------|---|----|
| 125 | 703 | 629 | 5:17.3 | -69:57 | 3X | 3 | 205*203 | | 9 | 3L | 3 | .14 | 6 | | | | 116 | 1.9 | 0.31* | | | | |
| 129 | 703 | 620 | 5:17.3 | -69:57 | 3X | 3 | 44* 45 | | 2 | 10C | 0 | .14 | 0 | | | | 116 | 1.9 | 5.6* | | | | |
| 130 | 703 | 626 | 5:17.3 | -69:57 | 3X | 3 | 105*106 | | 2 | 30C | 0 | .14 | 0 | | | | 116 | 1.9 | 16.7* | | | | |
| 124 | 710 | 630 | 5:17.4 | -69:30 | 2X | 2 | 92* 90 | | 0 | 1L | 0 | .15 | -- | | | | 117 | 1.5 | -- | | | | |
| 125 | 719 | 629 | 5:17.4 | -69:30 | 2X | 2 | 245*240 | | 10 | 3L | 6 | .15 | 13 | | | | 117 | 1.5 | 0.12 | | | | |
| 129 | 721 | 631 | 5:17.4 | -69:30 | 2X | 2 | 109*100 | | 40 | 10C | 4 | .15 | 7 | | | | 117 | 1.5 | 0.21 | | | | |
| 130 | 721 | 629 | 5:17.4 | -69:30 | 2X | 2 | 630*610 | | 195 | 30C | 7* | .15 | 12 | | | | 117 | 1.5 | 0.13 | | | | |
| 124 | 684 | 627 | 5:17.7 | -70:21 | 2X | 2 | 80 74 | | 20 | 1L | 20 | .11 | 35 | | | | -- | | | | | | |
| 125 | 687 | 627 | 5:17.7 | -70:21 | 2X | 2 | 190 100 | | 34 | 3L | 11 | .11 | 20 | | | | -- | | | | | | |
| 129 | 695 | 627 | 5:17.7 | -70:21 | 2X | 2 | 50 36 | | 40 | 10C | 5 | .11 | 7 | | | | -- | | | | | | |
| 130 | 695 | 624 | 5:17.7 | -70:21 | 3X | 2 | 120 89 | | 144 | 30C | 5 | .11 | 7 | | | | -- | | | | | | |
| 124 | 894 | 645 | 5:17.8 | -66:04 | 4X | 4 | 77 75 | | 10 | 1L | 10 | .11 | 10 | | | | 35 | 2.9 | 0.16 | | | | |
| 125 | 894 | 646 | 5:17.8 | -66:04 | 4X | 4 | 196*194 | | 20 | 3L | 9 | .11 | 17 | | | | 35 | 2.9 | 0.17 | | | | |
| 129 | 893 | 646 | 5:17.8 | -66:04 | 4X | 4 | 66 59 | | 40 | 10C | 4 | .11 | 6 | | | | 35 | 2.9 | 0.49 | | | | |
| 130 | 894 | 644 | 5:17.8 | -66:04 | 4X | 4 | 163 144 | | 95 | 30C | 3 | .11 | 5 | | | | 35 | 2.9 | 0.59 | | | | |
| 124 | 799 | 634 | 5:18.0 | -67:57 | 3X | 3 | 79* 70 | | 1 | 1L | 1 | .20 | 3 | | | | 36 | 1.0 | 0.33* | | | | |
| 125 | 800 | 636 | 5:18.0 | -67:57 | 3X | 3 | 196*194 | | 7 | 3L | 2 | .20 | 6 | | | | 36 | 1.0 | 0.16* | | | | |
| 129 | 799 | 633 | 5:18.0 | -67:57 | 3X | 3 | 51* 52 | | -1 | 10C | 0 | .20 | -- | | | | 36 | 1.0 | -- | | | | |
| 130 | 800 | 633 | 5:18.0 | -67:57 | 3X | 3 | 112*113 | | -6 | 30C | 0 | .20 | -- | | | | 36 | 1.0 | -- | | | | |
| 125 | 830 | 630 | 5:18.1 | -67:10 | 5X | 3 | 202 191 | | 97 | 3L | 32 | .13 | 63 | -- | | | | | | 1905 | | | |
| 129 | 829 | 639 | 5:18.1 | -67:10 | 3X | 4 | 63 50 | | 09 | 10C | 9 | .13 | 15 | -- | | | | | | 1905 | | | |
| 130 | 829 | 635 | 5:18.1 | -67:10 | 5X | 4 | 153 110 | | 393 | 30C | 13 | .13 | 22 | -- | | | | | | 1905 | | | |
| 124 | 709 | 626 | 5:18.2 | -69:53 | 5X | 4 | 07 70 | | 97 | 1L | 97 | .13 | 109 | | | | (116.121) | | | | | | |
| 125 | 709 | 627 | 5:18.2 | -69:53 | 9X | 7 | 220 214* | | 250 | 3L | 03 | .13 | 162 | | | | (116.121) | | | | | | |
| 129 | 700 | 626 | 5:18.2 | -69:53 | 5X | 4 | 90 53 | | 445 | 10C | 45 | .13 | 73 | | | | (116.121) | | | | | | |

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| FR. | X | Y | R.A. | DEC. | *X*Y | P | BG | V | E.F | V/E | PE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAD NO. | M | SP | |
|-----|-----|-----|--------|--------|------------|-----|-------|-----|-----|-------|------|------|--------|------|-----|-----------|-------|------|---------|---------|---|----|--|
| 130 | 708 | 623 | 5:18.2 | -69:53 | 6X 6 271 | 135 | 1660 | 30C | | 55 | .13 | 91 | | | | (116,121) | | | | | | | |
| 124 | 638 | 620 | 5:18.4 | -71:18 | 5X 4 74* | 74 | 19 | 1L | | 19 | .15 | 41 | (LH+0) | | | 195,AB | 15.7 | 0.38 | 1914 | | | | |
| 125 | 641 | 622 | 5:18.4 | -71:18 | 5X 4 189* | 187 | 34 | 3L | | 11 | .15 | 24 | (LH+0) | | | 195,AB | 15.7 | 0.65 | 1914 | | | | |
| 129 | 641 | 621 | 5:18.4 | -71:18 | 5X 4 54 | 40 | 68 | 10C | | 7 | .15 | 12 | (LH+0) | | | 195,AB | 15.7 | 1.30 | 1914 | | | | |
| 130 | 641 | 619 | 5:18.4 | -71:18 | 5X 4 122 | 93 | 160 | 30C | | 5 | .15 | 10 | (LH+0) | | | 195,AB | 15.7 | 1.57 | 1914 | | | | |
| 124 | 642 | 620 | 5:18.4 | -71:14 | 3X 3 74* | 74 | 3 | 1L | | 3 | .15 | 6 | LH+0 | 1.0 | 1.0 | -- | (195) | | | 1914 | | | |
| 125 | 644 | 622 | 5:18.4 | -71:14 | 3X 3 192 | 187 | 21 | 3L | | 7 | .15 | 15 | LH+0 | 1.0 | 1.0 | -- | (195) | | | 1914 | | | |
| 129 | 641 | 621 | 5:18.4 | -71:14 | 3X 3 54 | 44 | 35 | 10C | | 4 | .15 | 6 | LH+0 | 1.0 | 1.0 | -- | (195) | | | 1914 | | | |
| 130 | 641 | 619 | 5:18.4 | -71:14 | 3X 3 122 | 104 | 57 | 30C | | 2 | .15 | 3 | LH+0 | 1.0 | 1.0 | -- | (195) | | | 1914 | | | |
| 124 | 737 | 625 | 5:18.5 | -69:13 | 5X 8 199 | 123 | 723 | 1L | | 723 | .15* | 1555 | LH+1 | 4.0 | 7.0 | 52 | (119) | | | 1910 | | | |
| 125 | 740 | 629 | 5:18.5 | -69:13 | 5X 8 346* | 325 | 2129 | 3L | | 710 | .15* | 1525 | LH+1 | 4.0 | 7.0 | 52 | (119) | | | 1910 | | | |
| 129 | 738 | 627 | 5:18.5 | -69:13 | 5X 8 616* | 296 | 4593 | 10C | | 459* | .15* | 816 | LH+1 | 4.0 | 7.0 | 52 | (119) | | | 1910 | | | |
| 130 | 738 | 623 | 5:18.5 | -69:13 | 5X 8 953 | 693 | 3640 | 30C | | 121* | .15* | 216 | LH+1 | 4.0 | 7.0 | 52 | (119) | | | 1910 | | | |
| 124 | 819 | 631 | 5:18.6 | -67:30 | 2X 2 80 | 74 | 20 | 1L | | 20 | .14 | 41 | | | | | | | | -- | | | |
| 125 | 821 | 632 | 5:18.6 | -67:30 | 3X 3 201 | 191 | 65 | 3L | | 22 | .14 | 45 | | | | | | | | -- | | | |
| 129 | 823 | 631 | 5:18.6 | -67:30 | 2X 2 50 | 44 | 20 | 10C | | 2 | .14 | 3 | | | | | | | | -- | | | |
| 130 | 823 | 628 | 5:18.6 | -67:30 | 2X 2 121 | 105 | 63 | 30C | | 2 | .14 | 4 | | | | | | | | -- | | | |
| 124 | 737 | 625 | 5:18.7 | -69:15 | 15X13 199 | 85 | 3199 | 1L | | 3199 | .15 | 6875 | (LH+1) | | | 119,A | 1028. | 0.15 | 1910 | | | | |
| 125 | 738 | 626 | 5:18.7 | -69:15 | 15X13 702 | 221 | 13325 | 3L | | 4442* | .15 | 9550 | (LH+1) | | | 119,A | 1028. | 0.11 | 1910 | | | | |
| 129 | 737 | 626 | 5:18.7 | -69:15 | 15X13 830 | 90 | 17565 | 10C | | 1757* | .15 | 3120 | (LH+1) | | | 119,A | 1028. | 0.33 | 1910 | | | | |
| 130 | 737 | 622 | 5:18.7 | -69:15 | 15X13 922* | 240 | 37050 | 30C | | 1235* | .15 | 2200 | (LH+1) | | | 119,A | 1028. | 0.47 | 1910 | | | | |
| 124 | 903 | 637 | 5:19.0 | -65:51 | 2X 2 78 | 75 | 11 | 1L | | 11 | .18 | 27 | | | | | | | | -- | | | |
| 125 | 904 | 640 | 5:19.0 | -65:51 | 2X 2 198 | 189 | 33 | 3L | | 11 | .18 | 27 | | | | | | | | -- | | | |
| 129 | 904 | 640 | 5:19.0 | -65:51 | 4X 5 61 | 47 | 182 | 10C | | 18 | .18 | 36 | | | | | | | | -- | | | |
| 130 | 904 | 638 | 5:19.0 | -65:51 | 5X 6 151 | 115 | 597 | 30C | | 30 | .18 | 60 | | | | | | | | -- | | | |

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| FP. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | L.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAC NO. | M | SP |
|-----|-----|-----|--------|--------|------|-----|------|------|-----|------|-----|-----|--------|--------|------|----|-----------|------|-------|----------|---------|---|----|
| 124 | 783 | 626 | 5:19.1 | -68:16 | 2X 2 | 82 | 76 | 24 | 1L | 24 | .19 | 63 | | | | | | | | | -- | | |
| 125 | 786 | 628 | 5:19.1 | -68:16 | 3X 3 | 205 | 196 | 57 | 3L | 19 | .19 | 50 | | | | | | | | | -- | | |
| 129 | 785 | 626 | 5:19.1 | -68:16 | 3X 3 | 95 | 44 | 73 | 10C | 7 | .19 | 15 | | | | | | | | | -- | | |
| 130 | 785 | 624 | 5:19.1 | -68:16 | 4X 3 | 133 | 108 | 204 | 30C | 7 | .19 | 14 | | | | | | | | | -- | | |
| 124 | 714 | 622 | 5:19.3 | -69:43 | 7X 9 | 92 | 90 | 182 | 1L | 182 | .12 | 338 | (LM42) | | | | 120.A-D | 293. | 0.87 | 1918 | | | |
| 125 | 716 | 621 | 5:19.3 | -69:43 | 7X 9 | 380 | 258 | 893 | 3L | 298 | .12 | 554 | (LM42) | | | | 120.A-D | 293. | 0.53 | 1918 | | | |
| 129 | 717 | 620 | 5:19.3 | -69:43 | 7X 9 | 324 | 130 | 2255 | 10C | 226 | .12 | 358 | (LM42) | | | | 120.A-D | 293. | 0.82 | 1918 | | | |
| 130 | 715 | 619 | 5:19.3 | -69:43 | 7X 9 | 565 | 393 | 7509 | 30C | 250* | .12 | 398 | (LM42) | | | | 120.A-D | 293. | 0.74 | 1918 | | | |
| 124 | 777 | 625 | 5:19.3 | -68:24 | 2X 2 | 74 | 75 | -1 | 1L | -1 | .18 | -- | | | | | 118 | 1.5 | -- | | | | |
| 125 | 778 | 625 | 5:19.3 | -68:24 | 2X 2 | 193 | 194 | -1 | 3L | 0 | .18 | -- | | | | | 118 | 1.5 | -- | | | | |
| 129 | 777 | 625 | 5:19.3 | -68:24 | 2X 2 | 46 | 45 | 1 | 10C | 0 | .18 | 0 | | | | | 118 | 1.5 | 7.6* | | | | |
| 130 | 778 | 624 | 5:19.3 | -68:24 | 2X 2 | 115 | 114 | 15 | 30C | 1 | .18 | 1 | | | | | 118 | 1.5 | 1.52 | | | | |
| 124 | 717 | 620 | 5:19.7 | -69:38 | 4X 4 | 116 | 104 | 61 | 1L | 61 | .12 | 114 | LM42 | 2.0 | 1.5 | -- | (120) | | | 1918 | | | |
| 125 | 720 | 619 | 5:19.7 | -69:38 | 4X 4 | 266 | 273 | 328 | 3L | 109 | .12 | 203 | LM42 | 2.0 | 1.5 | -- | (120) | | | 1918 | | | |
| 129 | 717 | 620 | 5:19.7 | -69:38 | 4X 4 | 324 | 209 | 487 | 10C | 49 | .12 | 78 | LM42 | 2.0 | 1.5 | -- | (120) | | | 1918 | | | |
| 130 | 718 | 617 | 5:19.7 | -69:38 | 4X 4 | 734 | 607 | 1163 | 30C | 39* | .12 | 62 | LM42 | 2.0 | 1.5 | -- | (120) | | | 1918 | | | |
| 125 | 727 | 618 | 5:20.1 | -69:29 | 6X 4 | 257 | 232 | 450 | 3L | 150 | .13 | 292 | (LM46) | | | | (119,122) | | | 1922,26? | | | |
| 129 | 727 | 617 | 5:20.1 | -69:29 | 6X 9 | 139 | 112 | 732 | 10C | 73 | .13 | 121 | (LM46) | | | | (119,122) | | | 1922,26? | | | |
| 130 | 727 | 615 | 5:20.1 | -69:29 | 9X10 | 502 | 299* | 5720 | 30C | 191 | .13 | 314 | (LM46) | | | | (119,122) | | | 1922,26? | | | |
| 124 | 723 | 617 | 5:20.3 | -69:34 | 2X 2 | 92 | 91 | 2 | 1L | 2 | .12 | 4 | (LM46) | | | | 122 | 0.1 | 0.01* | | | | |
| 125 | 724 | 618 | 5:20.3 | -69:34 | 2X 2 | 250 | 251 | 3 | 3L | 1 | .12 | 2 | (LM46) | | | | 122 | 0.1 | 0.03* | | | | |
| 129 | 724 | 614 | 5:20.3 | -69:34 | 2X 2 | 153 | 146 | 23 | 10C | 2 | .12 | 4 | (LM46) | | | | 122 | 0.1 | 0.01 | | | | |
| 130 | 724 | 612 | 5:20.3 | -69:34 | 2X 2 | 533 | 495 | 71 | 30C | 2 | .12 | 4 | (LM46) | | | | 122 | 0.1 | 0.01 | | | | |
| 124 | 853 | 626 | 5:20.3 | -66:56 | 4X 5 | 81 | 78 | 13 | 1L | 13 | .12 | 24 | | | | | 37 | 12.2 | 0.51 | | | | |
| 125 | 852 | 629 | 5:20.3 | -66:56 | 4X 5 | 204 | 199 | 10 | 3L | 3 | .12 | 6 | | | | | 37 | 12.2 | 1.96 | | | | |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|-----|----|-----|-----|------|-----|-----|------|-----|--------|------|-----|-----------|-------|-------|---------|---------|---|------|
| 129 | 852 | 628 | 5:20.3 | -66:56 | 4X | 5 | 57 | 54 | 22 | 10C | 2 | .12 | 4 | | | | 37 | 12.2 | 3.49 | | | | |
| 130 | 852 | 626 | 5:20.3 | -66:56 | 4X | 5 | 141 | 129 | 54 | 30C | 2 | .12 | 3 | | | | 37 | 12.2 | 4.27 | | | | |
| 124 | 830 | 625 | 5:20.4 | -67:21 | 5X | 2 | 83 | 76 | 41 | 1L | 41 | .13 | 80 | | | | | | | | | | -- |
| 125 | 831 | 626 | 5:20.4 | -67:21 | 5X | 6 | 210 | 193 | 290 | 3L | 97 | .13 | 189 | | | | | | | | | | -- |
| 129 | 830 | 626 | 5:20.4 | -67:21 | 5X | 6 | 71 | 47 | 349 | 10C | 35 | .13 | 58 | | | | | | | | | | -- |
| 130 | 830 | 624 | 5:20.4 | -67:21 | 6X | 8 | 178 | 115 | 1300 | 30C | 43 | .13 | 71 | | | | | | | | | | -- |
| 124 | 854 | 628 | 5:20.6 | -66:50 | 3X | 3 | 78 | 78 | 2 | 1L | 2 | .11 | 4 | | | | 38 | 7.6 | 1.89* | | | | |
| 125 | 855 | 628 | 5:20.6 | -66:50 | 3X | 3 | 201 | 197 | 9 | 3L | 3 | .11 | 5 | | | | 38 | 7.6 | 1.41* | | | | |
| 129 | 857 | 627 | 5:20.6 | -66:50 | 3X | 3 | 57 | 55 | 11 | 10C | 1 | .11 | 2 | | | | 38 | 7.6 | 4.5* | | | | |
| 130 | 857 | 626 | 5:20.6 | -66:50 | 3X | 3 | 130 | 128 | 12 | 30C | 0 | .11 | 1 | | | | 38 | 7.6 | 12.4* | | | | |
| 124 | 793 | 619 | 5:20.7 | -68:04 | 3X | 3 | 83 | 82 | 5 | 1L | 5 | .26 | 18 | | | | 41 | 1.0 | 0.06* | | | | |
| 125 | 794 | 620 | 5:20.7 | -68:04 | 3X | 3 | 201 | 203 | -3 | 3L | -1 | .26 | -- | | | | 41 | 1.0 | -- | | | | |
| 129 | 793 | 619 | 5:20.7 | -68:04 | 3X | 3 | 53 | 53 | -2 | 10C | 0 | .26 | -- | | | | 41 | 1.0 | -- | | | | |
| 130 | 794 | 617 | 5:20.7 | -68:04 | 3X | 3 | 130 | 132 | 1 | 30C | 0 | .26 | 0 | | | | 41 | 1.0 | 11.1* | | | | |
| 124 | 923 | 629 | 5:20.9 | -65:28 | 7X | 5 | 83 | 78 | 29 | 1L | 29 | .19* | 76 | LH43 | 6.0 | 3.0 | 9 | (40) | | | | | 1923 |
| 129 | 924 | 632 | 5:20.9 | -65:28 | 7X | 5 | 78 | 60 | 205 | 10C | 21 | .19* | 43 | LH43 | 6.0 | 3.0 | 9 | (40) | | | | | 1923 |
| 130 | 925 | 631 | 5:20.9 | -65:28 | 7X | 5 | 198 | 151 | 569 | 30C | 19 | .19* | 40 | LH43 | 6.0 | 3.0 | 9 | (40) | | | | | 1923 |
| 129 | 726 | 614 | 5:21.0 | -69:32 | 14X | 19 | 153 | 70 | 8550 | 10C | 855 | .13 | 410 | (LH46) | | | (119,122) | | | | | | |
| 124 | 745 | 613 | 5:21.4 | -69:04 | 6X | 6 | 81 | 80 | 19 | 1L | 19 | .15* | 41 | LH44 | 5.0 | 5.0 | 8 | (126) | | | | | |
| 125 | 746 | 614 | 5:21.4 | -69:04 | 6X | 6 | 210 | 206 | 50 | 3L | 17 | .15* | 37 | LH44 | 5.0 | 5.0 | 8 | (126) | | | | | |
| 129 | 745 | 613 | 5:21.4 | -69:04 | 6X | 6 | 80 | 58 | 217 | 10C | 22 | .15* | 39 | LH44 | 5.0 | 5.0 | 8 | (126) | | | | | |
| 130 | 746 | 611 | 5:21.4 | -69:04 | 6X | 6 | 212 | 144 | 573 | 30C | 19 | .15* | 34 | LH44 | 5.0 | 5.0 | 8 | (126) | | | | | |
| 124 | 922 | 627 | 5:21.5 | -65:30 | 3X | 3 | 73 | 76 | -5 | 1L | -5 | .18 | -- | (LH43) | | | 40 | 5.5 | -- | | | | 1923 |
| 125 | 924 | 627 | 5:21.5 | -65:30 | 3X | 3 | 201 | 196 | 35 | 3L | 12 | .18 | 29 | (LH43) | | | 40 | 5.5 | 0.19 | | | | 1923 |
| 129 | 919 | 626 | 5:21.5 | -65:30 | 3X | 3 | 47 | 46 | 9 | 10C | 1 | .18 | 2 | (LH43) | | | 40 | 5.5 | 3.0* | | | | 1923 |

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| FR. | X | Y | P.A. | DEC. | *X | *Y | P | BO | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NOC NO. | SAC NO. | M | SP |
|-----|-----|-----|--------|--------|-----|----|---------|------|------|------|------|------|--------|---------|------|-------|---------|-----|-------|---------|---------|---|----|
| 130 | 92* | 629 | 5:21.5 | -65:30 | 3X | 3 | 188*174 | 43 | 30C | 1 | .18 | 3 | (LH43) | 40 | | | | 5.5 | 1.92* | 1923 | | | |
| 124 | 619 | 606 | 5:21.6 | -71:45 | 2X | 2 | 72* 73 | 4 | 1L | 4 | .16 | 9 | | 197 | | | | 0.6 | 0.07* | | | | |
| 125 | 620 | 607 | 5:21.6 | -71:45 | 2X | 2 | 190*191 | 4 | 3L | 1 | .16 | 3 | | 197 | | | | 0.6 | 0.20* | | | | |
| 129 | 620 | 606 | 5:21.6 | -71:45 | 2X | 2 | 42 41 | 3 | 10C | 0 | .16 | 1 | | 197 | | | | 0.6 | 1.08* | | | | |
| 130 | 620 | 604 | 5:21.6 | -71:45 | 2X | 2 | 99 97 | 4 | 30C | 0 | .16 | 0 | | 197 | | | | 0.6 | 2.44* | | | | |
| 124 | 908 | 626 | 5:21.6 | -65:48 | 10X | 9 | 89* 80 | 400 | 1L | 400 | .17* | 945 | LH45 | 10.0 | 9.0 | 25 | (43) | | | | | | |
| 125 | 908 | 627 | 5:21.6 | -65:48 | 10X | 9 | 233*209 | 874 | 3L | 291 | .17* | 686 | LH45 | 10.0 | 9.0 | 25 | (43) | | | | | | |
| 129 | 909 | 627 | 5:21.6 | -65:48 | 10X | 9 | 144 74 | 1739 | 10C | 174 | .17* | 334 | LH45 | 10.0 | 9.0 | 25 | (43) | | | | | | |
| 130 | 908 | 626 | 5:21.6 | -65:48 | 10X | 9 | 448*193 | 6346 | 30C | 211 | .17* | 406 | LH45 | 10.0 | 9.0 | 25 | (43) | | | | | | |
| 124 | 799 | 614 | 5:21.9 | -67:58 | 6X | 7 | 115* 95 | 338 | 1L | 338 | .28 | 1350 | (LH47) | 44BCF | 84.2 | 0.06 | 1929-36 | | | | | | |
| 125 | 801 | 616 | 5:21.9 | -67:58 | 6X | 7 | 331*269 | 956 | 3L | 319 | .28 | 1276 | (LH47) | 44BCF | 84.2 | 0.07 | 1929-36 | | | | | | |
| 129 | 800 | 616 | 5:21.9 | -67:58 | 6X | 7 | 228*156 | 1717 | 10C | 172 | .28 | 505 | (LH47) | 44BCF | 84.2 | 0.17 | 1929-36 | | | | | | |
| 130 | 800 | 614 | 5:21.9 | -67:58 | 6X | 7 | 619*430 | 3157 | 30C | 105* | .28 | 309 | (LH47) | 44BCF | 84.2 | 0.27 | 1929-36 | | | | | | |
| 124 | 745 | 611 | 5:21.9 | -69:05 | 2X | 3 | 82 80 | 5 | 1L | 5 | .15 | 11 | (LH44) | 126 | | | | 0.3 | 0.03* | | | | |
| 125 | 745 | 612 | 5:21.9 | -69:05 | 2X | 3 | 207*207 | 1 | 3L | 0 | .15 | 1 | (LH44) | 126 | | | | 0.3 | 0.4* | | | | |
| 129 | 745 | 613 | 5:21.9 | -69:05 | 2X | 3 | 80 73 | 23 | 10C | 2 | .15 | 4 | (LH44) | 126 | | | | 0.3 | 0.07 | | | | |
| 130 | 746 | 611 | 5:21.9 | -69:05 | 2X | 3 | 212 187 | 64 | 30C | 2 | .15 | 4 | (LH44) | 126 | | | | 0.3 | 0.07 | | | | |
| 124 | 715 | 607 | 5:22.0 | -69:43 | 3X | 3 | 83* 83 | 2 | 1L | 2 | .13 | 4 | | 127AB.9 | 18.7 | 4.67* | | | | | | | |
| 125 | 716 | 609 | 5:22.0 | -69:43 | 3X | 3 | 220*220 | 4 | 0 3L | 0 | .13 | -- | | 127AB.9 | 18.7 | -- | | | | | | | |
| 129 | 715 | 608 | 5:22.0 | -69:43 | 3X | 3 | 73* 74 | -1 | 10C | 0 | .13 | -- | | 127AB.9 | 18.7 | -- | | | | | | | |
| 130 | 716 | 606 | 5:22.0 | -69:43 | 3X | 3 | 210*215 | -10 | 30C | 0 | .13 | -- | | 127AB.9 | 18.7 | -- | | | | | | | |
| 124 | 728 | 609 | 5:22.1 | -69:27 | 5X | 5 | 91* 88 | 28 | 1L | 28 | .12 | 52 | LH46 | 4.0 | 3.0 | -- | (122) | | | | | | |
| 125 | 728 | 611 | 5:22.1 | -69:27 | 5X | 5 | 252 245 | 56 | 3L | 19 | .12 | 35 | LH46 | 4.0 | 3.0 | -- | (122) | | | | | | |
| 129 | 728 | 611 | 5:22.1 | -69:27 | 5X | 5 | 143 113 | 226 | 10C | 23 | .12 | 36 | LH46 | 4.0 | 3.0 | -- | (122) | | | | | | |
| 130 | 728 | 609 | 5:22.1 | -69:27 | 5X | 5 | 493 364 | 975 | 30C | 33 | .12 | 52 | LH46 | 4.0 | 3.0 | -- | (122) | | | | | | |

NRL REPORT 8206

| FR. X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAC NO. | M | SP |
|-------|-----|------|--------|--------|-------|---------|-------|-----|-------|-----|------|-----------|--------|------|------|-------------|------|-------|---------|---------|---|----|
| 124 | 802 | 612 | 5:22.2 | -67:57 | 5X 7 | 112*100 | 193 | 1L | 193 | .28 | 772 | LM47 | 4.0 | 6.0 | 40 | (44) | | | 1929-36 | | | |
| 125 | 802 | 614 | 5:22.2 | -67:57 | 5X 7 | 399 285 | 1041 | 3L | 347 | .28 | 1387 | LM47 | 4.0 | 6.0 | 40 | (44) | | | 1929-36 | | | |
| 129 | 801 | 614 | 5:22.2 | -67:57 | 5X 7 | 443 178 | 2143 | 10C | 214 | .28 | 630 | LM47 | 4.0 | 6.0 | 40 | (44) | | | 1929-36 | | | |
| 130 | 801 | 612 | 5:22.2 | -67:57 | 5X 7 | 868 537 | 3611 | 30C | 120* | .28 | 354 | LM47 | 4.0 | 6.0 | 40 | (44) | | | 1929-36 | | | |
| 124 | 908 | 623 | 5:22.2 | -65:46 | 6X11 | 87* 82 | 80 | 1L | 80 | .17 | 189 | (LM45) | | | | 43 | 64.4 | 0.34 | | | | |
| 125 | 909 | 624 | 5:22.2 | -65:46 | 6X11 | 220*214 | 240 | 3L | 80 | .17 | 189 | (LM45) | | | | 43 | 64.4 | 0.34 | | | | |
| 129 | 909 | 624 | 5:22.2 | -65:46 | 6X11 | 99* 82 | 608 | 10C | 61 | .17 | 117 | (LM45) | | | | 43 | 64.4 | 0.55 | | | | |
| 130 | 910 | 622 | 5:22.2 | -65:46 | 6X11 | 250*209 | 1637 | 30C | 55 | .17 | 105 | (LM45) | | | | 43 | 64.4 | 0.61 | | | | |
| 124 | 803 | 611 | 5:22.4 | -67:55 | 43* | 95* 95 | 312 | 1L | 312 | .28 | 1250 | LM47.48 | 30.0* | | 48 | (44) | | | 1929-37 | | | |
| 125 | 803 | 613 | 5:22.4 | -67:55 | 43* | 333 262 | 1636 | 3L | 545 | .28 | 2180 | LM47.48 | 30.0* | | 48 | (44) | | | 1929-37 | | | |
| 129 | 802 | 613 | 5:22.4 | -67:55 | 43* | 320*142 | 3337 | 10C | 334 | .28 | 981 | LM47.48 | 30.0* | | 48 | (44) | | | 1929-37 | | | |
| 130 | 802 | 611 | 5:22.4 | -67:55 | 43* | 830*430 | 7652 | 30C | 255* | .28 | 750 | LM47.48 | 30.0* | | 48 | (44) | | | 1929-37 | | | |
| 124 | 763 | 608 | 5:22.5 | -68:41 | 3X 3 | 79* 78 | 1 | 1L | 1 | .15 | 2 | | | | 128 | | 0.7 | 0.33* | | | | |
| 125 | 765 | 610 | 5:22.5 | -68:41 | 3X 3 | 202*201 | 8 | 3L | 3 | .15 | 6 | | | | 128 | | 0.7 | 0.12* | | | | |
| 129 | 763 | 608 | 5:22.5 | -68:41 | 3X 3 | 48* 48 | 1 | 10C | 0 | .15 | 0 | | | | 128 | | 0.7 | 3.9* | | | | |
| 130 | 764 | 606 | 5:22.5 | -68:41 | 3X 3 | 116*117 | 3 | 30C | 0 | .15 | 0 | | | | 128 | | 0.7 | 3.9* | | | | |
| 124 | 798 | 610 | 5:22.6 | -67:59 | 18X15 | 93* 80 | 1584 | 1L | 1584 | .28 | 6330 | (LM47-49) | | | | 44.A-N2040. | 0.32 | | 1929-37 | | | |
| 125 | 800 | 612 | 5:22.6 | -67:59 | 18X15 | 296*208 | 6300 | 3L | 2100 | .28 | 8410 | (LM47-49) | | | | 44.A-N2040. | 0.24 | | 1929-37 | | | |
| 129 | 799 | 612 | 5:22.6 | -67:59 | 18X15 | 180* 65 | 9098 | 10C | 910 | .28 | 2675 | (LM47-49) | | | | 44.A-N2040. | 0.76 | | 1929-37 | | | |
| 130 | 799 | 610 | 5:22.6 | -67:59 | 18X15 | 545*157 | 30319 | 30C | 1011* | .28 | 2970 | (LM47-49) | | | | 44.A-N2040. | 0.69 | | 1929-37 | | | |
| 124 | 804 | 611 | 5:22.6 | -67:53 | 4X 4 | 90* 98 | 49 | 1L | 49 | .28 | 196 | LM48 | 2.0 | 2.0 | 8 | (44) | | | 1937 | | | |
| 125 | 805 | 612 | 5:22.6 | -67:53 | 4X 4 | 234*255 | 159 | 3L | 53 | .28 | 212 | LM48 | 2.0 | 2.0 | 8 | (44) | | | 1937 | | | |
| 129 | 804 | 612 | 5:22.6 | -67:53 | 4X 4 | 143*154 | 508 | 10C | 51 | .28 | 149 | LM48 | 2.0 | 2.0 | 8 | (44) | | | 1937 | | | |
| 130 | 804 | 610 | 5:22.6 | -67:53 | 4X 4 | 488*496 | 1329 | 30C | 44* | .28 | 130 | LM48 | 2.0 | 2.0 | 8 | (44) | | | 1937 | | | |
| 124 | 859 | 613 | 5:22.8 | -66:44 | 3X 3 | 76* 77 | 1 | 1L | 1 | .11 | 2 | | | | 45.A | | 5.0 | 2.72* | | | | |

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| FR. | X | Y | P.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | MI | NOC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|-----|----|---------|------|-----|-----|-----|----|-----|--------------|------|-----|-------|------|-------|---------|---------|---|----|
| 125 | 860 | 615 | 5:22.8 | -66:44 | 3X | 3 | 196*195 | 7 | 3L | 2 | .11 | | 4 | | | | 45.A | 5.0 | 1.22* | | | | |
| 129 | 860 | 615 | 5:22.8 | -66:44 | 3X | 3 | 51* 51 | 3 | 10C | 0 | .11 | | 0 | | | | 45.A | 5.0 | 10.9* | | | | |
| 130 | 861 | 613 | 5:22.8 | -66:44 | 3X | 3 | 140*139 | 5 | 30C | 0 | .11 | | 0 | | | | 45.A | 5.0 | 19.5* | | | | |
| 124 | 837 | 615 | 5:22.9 | -67:12 | 3X | 2 | 81 79 | 7 | 1L | 7 | .11 | | 12 | -- | | | | | | 1940 | | | |
| 125 | 837 | 613 | 5:22.9 | -67:12 | 5X | 4 | 216 199 | 149 | 3L | 50 | .11 | | 88 | -- | | | | | | 1940 | | | |
| 129 | 838 | 613 | 5:22.9 | -67:12 | 5X | 4 | 75 51 | 318 | 10C | 32 | .11 | | 49 | -- | | | | | | 1940 | | | |
| 130 | 838 | 611 | 5:22.9 | -67:12 | 12X | 7 | 208 124 | 2730 | 30C | 91 | .11 | | 139 | -- | | | | | | 1940 | | | |
| 124 | 895 | 618 | 5:22.9 | -66:04 | 3X | 3 | 84 77 | 46 | 1L | 46 | .14 | | 94 | -- | | | | | | 1932? | | | |
| 125 | 895 | 620 | 5:22.9 | -66:04 | 5X | 4 | 213 198 | 183 | 3L | 61 | .14 | | 125 | -- | | | | | | 1932? | | | |
| 129 | 895 | 619 | 5:22.9 | -66:04 | 4X | 3 | 68 51 | 158 | 10C | 16 | .14 | | 27 | -- | | | | | | 1932? | | | |
| 130 | 895 | 617 | 5:22.9 | -66:04 | 11X | 12 | 183 120 | 3809 | 30C | 127 | .14 | | 216 | -- | | | | | | 1932? | | | |
| 124 | 692 | 601 | 5:23.0 | -70:13 | 3X | 3 | 77* 77 | 0 | 1L | 0 | .15 | | -- | | | | 130 | 3.6 | -- | | | | |
| 125 | 693 | 602 | 5:23.0 | -70:13 | 3X | 3 | 196*198 | -11 | 3L | -4 | .15 | | -- | | | | 130 | 3.6 | -- | | | | |
| 129 | 692 | 602 | 5:23.0 | -70:13 | 3X | 3 | 41* 42 | -2 | 10C | 0 | .15 | | -- | | | | 130 | 3.6 | -- | | | | |
| 130 | 693 | 600 | 5:23.0 | -70:13 | 3X | 3 | 104 104 | 1 | 30C | 0 | .15 | | 0 | | | | 130 | 3.6 | -- | | | | |
| 124 | 795 | 609 | 5:23.1 | -68:04 | 5X | 5 | 89 85 | 13 | 1L | 13 | .28 | | 52 | LM9 | 4.0 | 3.0 | 8 | (44) | | 1C2128 | | | |
| 125 | 798 | 608 | 5:23.1 | -68:04 | 5X | 5 | 228*224 | 69 | 3L | 23 | .28 | | 92 | LM9 | 4.0 | 3.0 | 8 | (44) | | 1C2128 | | | |
| 129 | 797 | 608 | 5:23.1 | -68:04 | 5X | 5 | 90* 88 | 83 | 10C | 8 | .28 | | 24 | LM9 | 4.0 | 3.0 | 8 | (44) | | 1C2128 | | | |
| 130 | 797 | 606 | 5:23.1 | -68:04 | 5X | 5 | 245*244 | 203 | 30C | 7 | .28 | | 20 | LM9 | 4.0 | 3.0 | 8 | (44) | | 1C2128 | | | |
| 124 | 876 | 612 | 5:23.1 | -66:25 | 3X | 3 | 79* 79 | 0 | 1L | 0 | .10 | | -- | | | | 46 | 5.0 | -- | | | | |
| 125 | 877 | 613 | 5:23.1 | -66:25 | 3X | 3 | 202 201 | 6 | 3L | 2 | .10 | | 3 | | | | 46 | 5.0 | 1.47* | | | | |
| 129 | 876 | 616 | 5:23.1 | -66:25 | 3X | 3 | 62* 60 | 6 | 10C | 1 | .10 | | 1 | | | | 46 | 5.0 | 5.6* | | | | |
| 130 | 877 | 613 | 5:23.1 | -66:25 | 3X | 3 | 167*161 | 24 | 30C | 1 | .10 | | 1 | | | | 46 | 5.0 | 4.2* | | | | |
| 124 | 625 | 600 | 5:23.2 | -71:38 | 8X | 7 | 82 77 | 19 | 1L | 19 | .16 | | 43 | (SA02561807) | | | 198 | 58.3 | 1.35 | | | | |
| 125 | 627 | 603 | 5:23.2 | -71:38 | 8X | 7 | 212 190 | 284 | 3L | 95 | .16 | | 214 | (SA02561807) | | | 198 | 58.3 | 0.27 | | | | |

NRL REPORT 8206

| CR | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|-----|----|-----|-----|------|-----|-----|-----|-----|--------------|------|---------|-------|------|-------|---------|---------|-----|----|
| 129 | 624 | 601 | 5:23.2 | -71:38 | 8X | 7 | 51 | 44 | 214 | 10C | 21 | .16 | 40 | (SA02561807) | | 198 | | 58.3 | 1.47 | | | | |
| 130 | 626 | 599 | 5:23.2 | -71:38 | 8X | 7 | 196 | 104 | 760 | 30C | 25 | .16 | 47 | (SA02561807) | | 198 | | 58.3 | 1.25 | | | | |
| 124 | 625 | 600 | 5:23.2 | -71:37 | 5X | 3 | 82 | 74 | 68 | 1L | 68 | .05 | 88 | | | | | | | | 2561807 | 7.4 | A3 |
| 125 | 627 | 603 | 5:23.2 | -71:37 | 5X | 4 | 212 | 187 | 236 | 3L | 79 | .05 | 103 | | | | | | | | 2561807 | 7.4 | A3 |
| 130 | 626 | 599 | 5:23.2 | -71:37 | 9X | 6 | 196 | 85 | 1890 | 30C | 63 | .05 | 76 | | | | | | | | 2561807 | 7.4 | A3 |
| 129 | 626 | 601 | 5:23.2 | -71:33 | 5X | 5 | 75 | 36 | 348 | 10C | 35 | .05 | 42 | | | | | | | | 2561807 | 7.4 | A3 |
| 124 | 707 | 601 | 5:23.3 | -69:54 | 2X | 3 | 82 | 82 | 7 | 1L | 7 | .14 | 14 | | | 131 | | 2.0 | 0.14* | | | | |
| 125 | 707 | 602 | 5:23.3 | -69:54 | 2X | 3 | 212 | 211 | 14 | 3L | 5 | .14 | 10 | | | 131 | | 2.0 | 0.21 | | | | |
| 129 | 707 | 602 | 5:23.3 | -69:54 | 2X | 3 | 63 | 67 | 10 | 10C | 1 | .14 | 2 | | | 131 | | 2.0 | 1.17 | | | | |
| 130 | 708 | 600 | 5:23.3 | -69:54 | 2X | 3 | 176 | 186 | 49 | 30C | 2 | .14 | 3 | | | 131 | | 2.0 | 0.7* | | | | |
| 124 | 788 | 602 | 5:23.5 | -68:13 | 2X | 2 | 84 | 78 | 19 | 1L | 19 | .20 | 52 | | | | | | | | -- | | |
| 125 | 788 | 607 | 5:23.5 | -68:13 | 2X | 2 | 205 | 194 | 36 | 3L | 12 | .20 | 33 | | | | | | | | -- | | |
| 129 | 788 | 607 | 5:23.5 | -68:13 | 2X | 2 | 61 | 46 | 59 | 10C | 6 | .20 | 13 | | | | | | | | -- | | |
| 130 | 789 | 604 | 5:23.5 | -68:13 | 5X | 4 | 162 | 111 | 477 | 30C | 16 | .20 | 34 | | | | | | | | -- | | |
| 124 | 862 | 610 | 5:23.6 | -66:41 | 3X | 4 | 80 | 77 | 28 | 1L | 28 | .08 | 42 | | | (45.A) | | | | | | | |
| 125 | 863 | 611 | 5:23.6 | -66:41 | 5X | 5 | 210 | 197 | 145 | 3L | 48 | .08 | 73 | | | (45.A) | | | | | | | |
| 129 | 863 | 612 | 5:23.6 | -66:41 | 2X | 2 | 71 | 50 | 246 | 10C | 25 | .08 | 33 | | | (45.A) | | | | | | | |
| 130 | 864 | 611 | 5:23.6 | -66:41 | 7X | 7 | 187 | 121 | 1414 | 30C | 47 | .08 | 64 | | | (45.A) | | | | | | | |
| 124 | 637 | 600 | 5:24.0 | -71:23 | 13X | 8 | 80 | 78 | 59 | 1L | 59 | .17 | 139 | (LH50) | | 199,200 | 121.0 | 0.87 | | | | | |
| 125 | 639 | 600 | 5:24.0 | -71:23 | 13X | 8 | 212 | 192 | 270 | 3L | 90 | .17 | 212 | (LH50) | | 199,200 | 121.0 | 0.57 | | | | | |
| 129 | 637 | 600 | 5:24.0 | -71:23 | 13X | 8 | 75 | 49 | 169 | 10C | 17 | .17 | 32 | (LH50) | | 199,200 | 121.0 | 3.74 | | | | | |
| 130 | 638 | 595 | 5:24.0 | -71:23 | 13X | 8 | 151 | 112 | 1175 | 30C | 39 | .17 | 75 | (LH50) | | 199,200 | 121.0 | 1.61 | | | | | |
| 124 | 718 | 601 | 5:24.1 | -69:40 | 5X | 7 | 93 | 88 | 41 | 1L | 41 | .13 | 80 | | | 132A-J | | 11.4 | 0.14 | | | | |
| 125 | 719 | 601 | 5:24.1 | -69:40 | 5X | 7 | 248 | 234 | 177 | 3L | 59 | .13 | 115 | | | 132A-J | | 11.4 | 0.10 | | | | |
| 129 | 720 | 600 | 5:24.1 | -69:40 | 5X | 7 | 139 | 95 | 356 | 10C | 36 | .13 | 59 | | | 132A-J | | 11.4 | 0.19 | | | | |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LM NO. | SIZE | BS | N NO. | HA | HI | NOC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|-----|----|------|-----|------|-----|-----|-----|-----|--------|------|-----|---------|-------|-------|---------|---------|---|----|
| 130 | 721 | 598 | 5:24.1 | -69:40 | 5X | 7 | 465 | 267 | 1595 | 30C | 53 | .13 | 88 | | | | 132A-J | 11.4 | 0.12 | | | | |
| 124 | 752 | 598 | 5:24.4 | -68:58 | 2X | 3 | 84 | 82 | 4 | 1L | 4 | .10 | 7 | | | | 137AB | 0.5 | 0.07* | | | | |
| 125 | 753 | 600 | 5:24.4 | -68:58 | 2X | 3 | 210 | 207 | 6 | 3L | 2 | .10 | 3 | | | | 137AB | 0.5 | 0.15* | | | | |
| 129 | 752 | 599 | 5:24.4 | -68:58 | 2X | 3 | 59* | 58 | 1 | 10C | 0 | .10 | 0 | | | | 137AB | 0.5 | 3.4* | | | | |
| 130 | 753 | 597 | 5:24.4 | -68:58 | 2X | 3 | 149* | 144 | -3 | 30C | 0 | .10 | -- | | | | 137AB | 0.5 | -- | | | | |
| 124 | 637 | 598 | 5:24.5 | -71:23 | 8X | 9 | 83 | 77 | 37 | 1L | 37 | .17 | 87 | LM50 | 7.0 | 8.0 | 14 | (200) | | | | | |
| 125 | 639 | 597 | 5:24.5 | -71:23 | 8X | 9 | 196* | 190 | 47 | 3L | 16 | .17 | 37 | LM50 | 7.0 | 8.0 | 14 | (200) | | | | | |
| 129 | 638 | 599 | 5:24.5 | -71:23 | 8X | 9 | 76 | 50 | 147 | 10C | 15 | .17 | 28 | LM50 | 7.0 | 8.0 | 14 | (200) | | | | | |
| 130 | 638 | 597 | 5:24.5 | -71:23 | 8X | 9 | 212 | 123 | 706 | 30C | 24 | .17 | 45 | LM50 | 7.0 | 8.0 | 14 | (200) | | | | | |
| 124 | 773 | 598 | 5:24.8 | -68:33 | 7X | 8 | 89 | 84 | 69 | 1L | 69 | .13 | 135 | | | | 138.A-D | 64.4 | 0.48 | | | | |
| 125 | 777 | 599 | 5:24.8 | -68:33 | 7X | 8 | 228* | 211 | 302 | 3L | 101 | .13 | 197 | | | | 138.A-D | 64.4 | 0.33 | | | | |
| 129 | 774 | 596 | 5:24.8 | -68:33 | 7X | 8 | 106 | 66 | 530 | 10C | 53 | .13 | 88 | | | | 138.A-D | 64.4 | 0.74 | | | | |
| 130 | 775 | 596 | 5:24.8 | -68:33 | 7X | 8 | 320 | 167 | 1653 | 30C | 55 | .13 | 91 | | | | 138.A-D | 64.4 | 0.71 | | | | |
| 125 | 711 | 599 | 5:24.9 | -69:53 | 3X | 3 | 226 | 212 | 102 | 3L | 34 | .14 | 70 | | | | (131) | | | | | | |
| 129 | 709 | 598 | 5:24.9 | -69:53 | 4X | 7 | 89 | 69 | 358 | 10C | 36 | .14 | 61 | | | | (131) | | | | | | |
| 130 | 710 | 594 | 5:24.9 | -69:53 | 6X | 9 | 248 | 180 | 1831 | 30C | 61 | .14 | 104 | | | | (131) | | | | | | |
| 124 | 879 | 604 | 5:25.4 | -66:23 | 15X | 12 | 80* | 79 | 329 | 1L | 329 | .07 | 470 | LM53 | | | 48.A-E | 270.3 | 0.58 | | | | |
| 125 | 881 | 604 | 5:25.4 | -66:23 | 15X | 12 | 205* | 204 | 609 | 3L | 203 | .07 | 290 | LM53 | | | 48.A-E | 270.3 | 0.93 | | | | |
| 129 | 882 | 604 | 5:25.4 | -66:23 | 15X | 12 | 79* | 64 | 1014 | 10C | 101 | .07 | 132 | LM53 | | | 48.A-E | 270.3 | 2.06 | | | | |
| 130 | 883 | 602 | 5:25.4 | -66:23 | 15X | 12 | 236* | 159 | 3354 | 30C | 112 | .07 | 147 | LM53 | | | 48.A-E | 270.3 | 1.84 | | | | |
| 124 | 822 | 595 | 5:25.5 | -67:30 | 4X | 5 | 116 | 108 | 107 | 1L | 107 | .11 | 189 | LM51 | 1.5 | 3.0 | 5 | (52) | | | | | |
| 125 | 823 | 597 | 5:25.5 | -67:30 | 4X | 5 | 333* | 304 | 484 | 3L | 161 | .11 | 284 | LM51 | 1.5 | 3.0 | 5 | (52) | | | | | |
| 129 | 824 | 596 | 5:25.5 | -67:30 | 4X | 5 | 422 | 249 | 694 | 10C | 69 | .11 | 106 | LM51 | 1.5 | 3.0 | 5 | (52) | | | | | |
| 130 | 824 | 594 | 5:25.5 | -67:30 | 4X | 5 | 826 | 667 | 1354 | 30C | 45* | .11 | 69 | LM51 | 1.5 | 3.0 | 5 | (52) | | | | | |
| 124 | 530 | 591 | 5:25.7 | -71:32 | 3X | 3 | 76 | 75 | 5 | 1L | 5 | .17 | 12 | | | | 201.202 | 0.6 | 0.05* | | | | |

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| FR. | X | Y | R.A. | DEC. | *X*Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | MI | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|------|---------|----|------|-----|-----|-----|-----|---------|--------|-----|---------|------|-------|---------|---------|---|------|
| 125 | 631 | 592 | 5:25.7 | -71:32 | 3X 3 | 193*193 | | 4 | 3L | 1 | .17 | 3 | | | | 201.202 | 0.6 | 0.19* | | | | |
| 129 | 631 | 591 | 5:25.7 | -71:32 | 3X 3 | 41* 40 | | 4 | 10C | 0 | .17 | 1 | | | | 201.202 | 0.6 | 0.78* | | | | |
| 130 | 631 | 588 | 5:25.7 | -71:32 | 3X 3 | 94* 93 | | 5 | 30C | 0 | .17 | 0 | | | | 201.202 | 0.6 | 1.88* | | | | |
| 124 | 885 | 601 | 5:25.7 | -66:19 | 6X 3 | 90 86 | | 19 | 1L | 19 | .07 | 27 | (LM52) | | | 48A-C | 20.3 | 0.75 | 1948 | | | |
| 125 | 886 | 603 | 5:25.7 | -66:19 | 6X 3 | 228 217 | | 46 | 3L | 15 | .07 | 21 | (LM52) | | | 48A-C | 20.3 | 0.95 | 1948 | | | |
| 129 | 884 | 603 | 5:25.7 | -66:19 | 6X 3 | 101* 86 | | 125 | 10C | 13 | .07 | 16 | (LM52) | | | 48A-C | 20.3 | 1.24 | 1948 | | | |
| 130 | 885 | 601 | 5:25.7 | -66:19 | 6X 3 | 310 242 | | 344 | 30C | 11 | .07 | 15 | (LM52) | | | 48A-C | 20.3 | 1.33 | 1948 | | | |
| 124 | 886 | 601 | 5:25.7 | -66:17 | 6X 6 | 90 83 | | 72 | 1L | 72 | .07 | 103 | LM52 | 4.5 | 4.5 | 15 | (48) | | | | | 1948 |
| 125 | 885 | 603 | 5:25.7 | -66:17 | 6X 6 | 224*211 | | 233 | 3L | 78 | .07 | 112 | LM52 | 4.5 | 4.5 | 15 | (48) | | | | | 1948 |
| 129 | 885 | 603 | 5:25.7 | -66:17 | 6X 6 | 104 79 | | 286 | 10C | 29 | .07 | 38 | LM52 | 4.5 | 4.5 | 15 | (48) | | | | | 1948 |
| 130 | 886 | 601 | 5:25.7 | -66:17 | 6X 6 | 300*214 | | 857 | 30C | 29 | .07 | 38 | LM52 | 4.5 | 4.5 | 15 | (48) | | | | | 1948 |
| 124 | 623 | 587 | 5:25.8 | -71:40 | 2X 2 | 77 74 | | 11 | 1L | 11 | .17 | 26 | | | | | | | | | | -- |
| 125 | 624 | 591 | 5:25.8 | -71:40 | 3X 3 | 196 186 | | 46 | 3L | 15 | .17 | 36 | | | | | | | | | | -- |
| 129 | 624 | 593 | 5:25.8 | -71:40 | 2X 2 | 43 37 | | 24 | 10C | 2 | .17 | 5 | | | | | | | | | | -- |
| 130 | 625 | 591 | 5:25.8 | -71:40 | 2X 2 | 112 89 | | 75 | 30C | 3 | .17 | 5 | | | | | | | | | | -- |
| 125 | 729 | 578 | 5:25.9 | -69:25 | 5X 5 | 238 219 | | 278 | 3L | 93 | .15 | 200 | | | | | | | | | | -- |
| 124 | 729 | 592 | 5:25.9 | -69:28 | 5X 4 | 88 86 | | 23 | 1L | 23 | .12 | 43 | (LM46) | | | 142 | 10.4 | 0.25 | | | | |
| 125 | 729 | 592 | 5:25.9 | -69:28 | 5X 4 | 234*233 | | 63 | 3L | 21 | .12 | 39 | (LM46) | | | 142 | 10.4 | 0.27 | | | | |
| 129 | 729 | 593 | 5:25.9 | -69:28 | 5X 4 | 103 92 | | 50 | 10C | 5 | .12 | 8 | (LM46) | | | 142 | 10.4 | 1.31 | | | | |
| 130 | 730 | 591 | 5:25.9 | -69:28 | 5X 4 | 290 240 | | 205 | 30C | 7 | .12 | 11 | (LM46) | | | 142 | 10.4 | 0.96 | | | | |
| 124 | 738 | 591 | 5:25.9 | -69:15 | 8X 8 | 91* 87 | | 160 | 1L | 160 | .11 | 283 | (LM57) | | | 140.143 | 47.7 | 0.17 | | | | |
| 125 | 739 | 592 | 5:25.9 | -69:15 | 8X 8 | 243*232 | | 527 | 3L | 176 | .11 | 311 | (LM57) | | | 140.143 | 47.7 | 0.15 | | | | |
| 129 | 738 | 592 | 5:25.9 | -69:15 | 8X 8 | 100* 87 | | 657 | 10C | 66 | .11 | 101 | (LM57) | | | 140.143 | 47.7 | 0.47 | | | | |
| 130 | 739 | 589 | 5:25.9 | -69:15 | 8X 8 | 308*263 | | 2800 | 30C | 93 | .11 | 143 | (LM57) | | | 140.143 | 47.7 | 0.33 | | | | |
| 124 | 822 | 593 | 5:25.9 | -67:30 | 37* | 114*103 | | 215 | 1L | 215 | .11 | 380 | LM51.54 | 392.2* | 17 | (52) | | | | | | 1955 |

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| PR | X | Y | P.A. | DEC. | *X | *Y | P | BG | V | -.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NOC NO. | SAD NO. | M | SP |
|-----|-----|-----|--------|--------|-----|------|------|-----|------|-----|------|------|-----|---------|--------|-----|-------|------|-------|---------|---------|---|---------|
| 125 | 823 | 596 | 5:25.9 | -67:30 | 29* | 348* | 302 | | 470 | 3L | 157 | .11 | 278 | LM51.54 | 392.2* | 17 | (52) | | | | | | 1955 |
| 129 | 824 | 596 | 5:25.9 | -67:30 | 37* | 422 | 187 | | 2018 | 10C | 202 | .11 | 308 | LM51.54 | 392.2* | 17 | (52) | | | | | | 1955 |
| 130 | 824 | 592 | 5:25.9 | -67:30 | 37* | 790* | 582 | | 3989 | 30C | 133* | .11 | 203 | LM51.54 | 392.2* | 17 | (52) | | | | | | 1955 |
| 124 | 888 | 602 | 5:25.9 | -66:14 | 18X | 7 | 86* | 82 | 34 | 1L | 34 | .07* | 49 | LM52.53 | 19.0 | 6.0 | 34 | | | | | | 1948 |
| 125 | 888 | 602 | 5:25.9 | -66:14 | 18X | 7 | 215* | 205 | 450 | 3L | 150 | .07* | 214 | LM52.53 | 19.0 | 6.0 | 34 | | | | | | 1948 |
| 129 | 887 | 602 | 5:25.9 | -66:14 | 18X | 7 | 90* | 66 | 721 | 10C | 72 | .07* | 95 | LM52.53 | 19.0 | 6.0 | 34 | | | | | | 1948 |
| 130 | 887 | 600 | 5:25.9 | -66:14 | 18X | 7 | 253* | 164 | 3048 | 30C | 102 | .07* | 133 | LM52.53 | 19.0 | 6.0 | 34 | | | | | | 1948 |
| 124 | 830 | 597 | 5:26.0 | -67:12 | 5X | 4 | 87 | 83 | 21 | 1L | 21 | .14 | 43 | | | | 50 | 11.4 | 0.27 | | | | |
| 125 | 840 | 598 | 5:26.0 | -67:12 | 5X | 4 | 231 | 217 | 66 | 3L | 22 | .14 | 45 | | | | 50 | 11.4 | 0.25 | | | | |
| 129 | 839 | 598 | 5:26.0 | -67:12 | 5X | 4 | 98 | 78 | 96 | 10C | 10 | .14 | 16 | | | | 50 | 11.4 | 0.69 | | | | |
| 130 | 839 | 595 | 5:26.0 | -67:12 | 5X | 4 | 239 | 200 | 30 | 30C | 1 | .14 | 2 | | | | 50 | 11.4 | 6.6* | | | | |
| 124 | 891 | 599 | 5:26.0 | -66:08 | 3X | 3 | 79* | 79 | 4 | 1L | 4 | .07 | 6 | (LM53) | | | 49 | 13.2 | 2.2* | | | | |
| 125 | 892 | 602 | 5:26.0 | -66:08 | 3X | 3 | 210* | 206 | 6 | 3L | 2 | .07 | 3 | (LM53) | | | 49 | 13.2 | 4.4* | | | | |
| 129 | 892 | 601 | 5:26.0 | -66:08 | 3X | 3 | 68 | 65 | 13 | 10C | 1 | .07 | 2 | (LM53) | | | 49 | 13.2 | 7.77 | | | | |
| 130 | 892 | 599 | 5:26.0 | -66:08 | 3X | 3 | 160* | 160 | 7 | 30C | 0 | .07 | 0 | (LM53) | | | 49 | 13.2 | -- | | | | |
| 124 | 866 | 601 | 5:26.1 | -66:37 | 6X | 6 | 89 | 79 | 130 | 1L | 130 | .07 | 186 | -- | | | (48) | | | | | | 1951 |
| 125 | 869 | 599 | 5:26.1 | -66:37 | 7X | 5 | 226 | 197 | 549 | 3L | 183 | .07 | 262 | -- | | | (48) | | | | | | 1951 |
| 129 | 868 | 600 | 5:26.1 | -66:37 | 6X | 6 | 94 | 58 | 611 | 10C | 61 | .07 | 79 | -- | | | (48) | | | | | | 1951 |
| 130 | 869 | 598 | 5:26.1 | -66:37 | 8X | 9 | 260 | 143 | 2960 | 30C | 99 | .07 | 129 | -- | | | (48) | | | | | | 1951 |
| 124 | 706 | 588 | 5:26.2 | -69:55 | 2X | 2 | 82* | 82 | 0 | 1L | 0 | .15 | -- | (LM59) | | | 134 | 0.2 | -- | | | | 1969.71 |
| 125 | 707 | 590 | 5:26.2 | -69:55 | 2X | 2 | 213* | 213 | 2 | 3L | 1 | .15 | 1 | (LM59) | | | 134 | 0.2 | 0.1* | | | | 1969.71 |
| 129 | 707 | 589 | 5:26.2 | -69:55 | 2X | 2 | 78 | 77 | 2 | 10C | 0 | .15 | 0 | (LM59) | | | 134 | 0.2 | 0.45* | | | | 1969.71 |
| 130 | 707 | 588 | 5:26.2 | -69:55 | 2X | 2 | 195* | 198 | 15 | 30C | 1 | .15 | 1 | (LM59) | | | 134 | 0.2 | 0.22 | | | | 1969.71 |
| 124 | 822 | 592 | 5:26.2 | -67:30 | 5X | 5 | 110* | 105 | 68 | 1L | 68 | .11 | 120 | LM54 | 3.5 | 3.5 | 12 | | | | | | 1955 |
| 129 | 824 | 593 | 5:26.2 | -67:30 | 5X | 5 | 288* | 243 | 407 | 10C | 41 | .11 | 62 | LM54 | 3.5 | 3.5 | 12 | | | | | | 1955 |

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| FW | X | Y | P.A. | DEC. | X | Y | P | BQ | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | MOC NO. | SAD NO. | M | SP |
|-----|-----|-----|--------|--------|------|-----|-----|-----|------|-----|-----|-----|-----|--------|------|-----|-------|-----------|------|---------|---------|---|------|
| 120 | 824 | 591 | 5:26.2 | -67:30 | 5X | 5 | 755 | 620 | 1240 | 30C | 42 | .11 | 64 | LM54 | 3.5 | 3.5 | 12 | (52) | | | | | |
| 124 | 817 | 593 | 5:26.5 | -67:30 | 6X | 3 | 90 | 89 | -12 | 1L | -12 | .11 | -- | LM55 | 5.0 | 1.0 | 3 | (51) | | | | | 1955 |
| 125 | 818 | 595 | 5:26.5 | -67:30 | 6X | 3 | 245 | 239 | -25 | 3L | -8 | .11 | -- | LM55 | 5.0 | 1.0 | 3 | (51) | | | | | |
| 129 | 818 | 594 | 5:26.5 | -67:30 | 6X | 3 | 114 | 101 | 31 | 10C | 3 | .11 | 5 | LM55 | 5.0 | 1.0 | 3 | (51) | | | | | |
| 130 | 817 | 591 | 5:26.5 | -67:30 | 6X | 3 | 335 | 291 | 130 | 30C | 4 | .11 | 7 | LM55 | 5.0 | 1.0 | 3 | (51) | | | | | |
| 124 | 728 | 589 | 5:26.6 | -69:30 | 5X | 5 | 94 | 84 | 137 | 1L | 137 | .25 | 474 | | | | (142) | | | | | | |
| 125 | 728 | 590 | 5:26.6 | -69:30 | 6X | 5 | 250 | 220 | 482 | 3L | 161 | .25 | 556 | | | | (142) | | | | | | |
| 129 | 727 | 589 | 5:26.6 | -69:30 | 6X | 6 | 120 | 77 | 739 | 10C | 74 | .25 | 192 | | | | (142) | | | | | | |
| 130 | 728 | 587 | 5:26.6 | -69:30 | 7X | 9 | 368 | 206 | 3330 | 30C | 111 | .25 | 289 | | | | (142) | | | | | | |
| 124 | 814 | 592 | 5:26.7 | -67:41 | 9X10 | 86 | 82 | | 101 | 1L | 101 | .11 | 179 | LM55 | | | 518E | 315.9 | 1.77 | | | | |
| 125 | 815 | 593 | 5:26.7 | -67:41 | 9X10 | 223 | 216 | | 278 | 3L | 93 | .11 | 165 | LM55 | | | 518E | 315.9 | 1.91 | | | | |
| 129 | 814 | 592 | 5:26.7 | -67:41 | 9X10 | 81 | 62 | | 726 | 10C | 73 | .11 | 111 | LM55 | | | 518E | 315.9 | 2.84 | | | | |
| 130 | 815 | 590 | 5:26.7 | -67:41 | 9X10 | 252 | 161 | | 2130 | 30C | 71 | .11 | 109 | LM55 | | | 518E | 315.9 | 2.91 | | | | |
| 124 | 736 | 588 | 5:26.8 | -69:21 | 4X | 4 | 102 | 93 | 42 | 1L | 42 | .12 | 78 | LM57 | | | 143 | 18.6 | 0.24 | | | | |
| 125 | 735 | 589 | 5:26.8 | -69:21 | 4X | 4 | 243 | 124 | 101 | 3L | 34 | .12 | 63 | LM57 | | | 143 | 18.6 | 0.29 | | | | |
| 129 | 734 | 588 | 5:26.8 | -69:21 | 4X | 4 | 94 | 95 | 179 | 10C | 18 | .12 | 28 | LM57 | | | 143 | 18.6 | 0.66 | | | | |
| 130 | 735 | 586 | 5:26.8 | -69:21 | 4X | 4 | 350 | 305 | 894 | 30C | 30 | .12 | 47 | LM57 | | | 143 | 18.6 | 0.39 | | | | |
| 124 | 627 | 583 | 5:26.9 | -71:30 | 5X | 5 | 79 | 76 | 34 | 1L | 34 | .17 | 80 | LM56 | | | 2058 | 9.0 | 0.11 | | | | |
| 125 | 627 | 587 | 5:26.9 | -71:30 | 5X | 5 | 212 | 196 | 141 | 3L | 47 | .17 | 111 | LM56 | | | 2058 | 9.0 | 0.08 | | | | |
| 129 | 627 | 586 | 5:26.9 | -71:30 | 5X | 5 | 62 | 47 | 109 | 10C | 11 | .17 | 21 | LM56 | | | 2058 | 9.0 | 0.43 | | | | |
| 130 | 628 | 584 | 5:26.9 | -71:30 | 5X | 5 | 159 | 114 | 301 | 30C | 10 | .17 | 19 | LM56 | | | 2058 | 9.0 | 0.47 | | | | |
| 124 | 629 | 583 | 5:26.9 | -71:34 | 6X | 6 | 77 | 76 | 36 | 1L | 36 | .17 | 85 | LM56 | 5.0 | 5.0 | 2 | (202.205) | | | | | |
| 125 | 629 | 587 | 5:26.9 | -71:34 | 6X | 6 | 201 | 197 | 100 | 3L | 33 | .17 | 79 | LM56 | 5.0 | 5.0 | 2 | (202.205) | | | | | |
| 129 | 627 | 586 | 5:26.9 | -71:34 | 6X | 6 | 62 | 44 | 189 | 10C | 19 | .17 | 26 | LM56 | 5.0 | 5.0 | 2 | (202.205) | | | | | |
| 130 | 629 | 584 | 5:26.9 | -71:34 | 6X | 6 | 143 | 106 | 477 | 30C | 16 | .17 | 31 | LM56 | 5.0 | 5.0 | 2 | (202.205) | | | | | |

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| 14 | X | Y | P.A. | DEC. | *X*Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAD NO. | M | SP |
|-----|-----|-----|--------|--------|-------|---------|-------|-----|---------|-----|------|------------|--------|------|----|-----------|--------|------|---------|---------|---|----|
| 124 | 748 | 588 | 5:26.9 | -69:18 | 4X 4 | 94* 95 | 13 | 1L | 13 | .12 | 24 | LH57 | 1.5 | 1.5 | -- | (140.143) | | | | | | |
| 124 | 747 | 589 | 5:26.9 | -69:18 | 4X 4 | 268*252 | 132 | 3L | 44 | .12 | 82 | LH57 | 1.5 | 1.5 | -- | (140.143) | | | | | | |
| 124 | 746 | 589 | 5:26.9 | -69:18 | 4X 4 | 155 118 | 192 | 10C | 19 | .12 | 31 | LH57 | 1.5 | 1.5 | -- | (140.143) | | | | | | |
| 120 | 747 | 586 | 5:26.9 | -69:18 | 4X 4 | 488*372 | 839 | 30C | 28 | .12 | 44 | LH57 | 1.5 | 1.5 | -- | (140.143) | | | | | | |
| 124 | 759 | 586 | 5:26.9 | -68:52 | 9X 9 | 145 92 | 840 | 1L | 840 | .09 | 1335 | (LH58) | | | | 144,AB | 475.4 | 0.36 | 1962-66 | | | |
| 124 | 760 | 590 | 5:26.9 | -68:52 | 9X 9 | 505 249 | 3543 | 3L | 1181 | .09 | 1880 | (LH58) | | | | 144,AB | 475.4 | 0.25 | 1962-66 | | | |
| 124 | 759 | 549 | 5:26.9 | -68:52 | 9X 9 | 536 121 | 4828 | 10C | 483 | .09 | 680 | (LH58) | | | | 144,AB | 475.4 | 0.70 | 1962-66 | | | |
| 120 | 756 | 586 | 5:26.9 | -68:52 | 9X 9 | 803*437 | 10388 | 30C | 346*.09 | | 488 | (LH58) | | | | 144,AB | 475.4 | 0.97 | 1962-66 | | | |
| 124 | 820 | 542 | 5:26.9 | -67:35 | 19X18 | 95* 84 | 2732 | 1L | 2732 | .11 | 4830 | (LH51--63) | | | | 51, A-E | 1707.0 | 0.35 | 1947,55 | | | |
| 124 | 821 | 543 | 5:26.9 | -67:35 | 19X18 | 255*218 | 11351 | 3L | 3784 | .11 | 6700 | (LH51--63) | | | | 51, A-E | 1707.0 | 0.25 | 1947,55 | | | |
| 124 | 822 | 543 | 5:26.9 | -67:35 | 19X18 | 156* 77 | 15575 | 10C | 1558 | .11 | 2380 | (LH51--63) | | | | 51, A-E | 1707.0 | 0.72 | 1947,55 | | | |
| 120 | 822 | 531 | 5:26.9 | -67:35 | 19X18 | 448*198 | 50396 | 30C | 1680 | .11 | 2570 | (LH51--63) | | | | 51, A-E | 1707.0 | 0.66 | 1947,55 | | | |
| 124 | 709 | 586 | 5:27.0 | -69:51 | 4X 8 | 87 81 | 107 | 1L | 107 | .16 | 240 | (LH59) | | | | (134) | | | 1969,71 | | | |
| 124 | 712 | 589 | 5:27.0 | -69:51 | 7X11 | 234 208 | 824 | 3L | 275 | .16 | 618 | (LH59) | | | | (134) | | | 1969,71 | | | |
| 124 | 710 | 587 | 5:27.0 | -69:51 | 8X12 | 105 60 | 2130 | 10C | 213 | .16 | 394 | (LH59) | | | | (134) | | | 1969,71 | | | |
| 120 | 711 | 585 | 5:27.0 | -69:51 | 11X14 | 312 159 | 7750 | 30C | 258 | .16 | 478 | (LH59) | | | | (134) | | | 1969,71 | | | |
| 124 | 759 | 588 | 5:27.0 | -68:49 | 5X 5 | 145 109 | 278 | 1L | 278 | .09 | 442 | LH58 | 4.0 | 4.0 | 22 | (144) | | | 1962-66 | | | |
| 124 | 761 | 590 | 5:27.0 | -68:49 | 5X 5 | 417*321 | 828 | 3L | 276 | .09 | 439 | LH58 | 4.0 | 4.0 | 22 | (144) | | | 1962-66 | | | |
| 124 | 760 | 588 | 5:27.0 | -68:49 | 5X 5 | 348*219 | 1263 | 10C | 126 | .09 | 178 | LH58 | 4.0 | 4.0 | 22 | (144) | | | 1962-66 | | | |
| 120 | 760 | 586 | 5:27.0 | -68:49 | 5X 5 | 812*615 | 1807 | 30C | 60*.09 | | 85 | LH58 | 4.0 | 4.0 | 22 | (144) | | | 1962-66 | | | |
| 124 | 879 | 594 | 5:27.1 | -66:24 | 2X 2 | 84 79 | 18 | 1L | 18 | .07 | 26 | | | | | (48) | | | | | | |
| 124 | 880 | 597 | 5:27.1 | -66:24 | 2X 4 | 216 205 | 65 | 3L | 22 | .07 | 32 | | | | | (48) | | | | | | |
| 124 | 880 | 595 | 5:27.1 | -66:24 | 5X13 | 81 57 | 531 | 10C | 53 | .07 | 70 | | | | | (48) | | | | | | |
| 120 | 880 | 592 | 5:27.1 | -66:24 | 8X10 | 212 159 | 1950 | 30C | 65 | .07 | 85 | | | | | (48) | | | | | | |
| 124 | 826 | 588 | 5:27.2 | -67:28 | 7X 5 | 126 109 | 180 | 1L | 180 | .14 | 370 | LH60 | 6.0 | 3.0 | 16 | (51) | | | 1968 | | | |

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| IP. | X | Y | P.A. | DEC. | *X | *Y | P | BO | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | MGC NO. | SAO NO. | M | SP | |
|-----|-----|-----|--------|--------|-----|----|-----------|------|------|------|-----|------|------|---------|---------|-------|-------|-------|-------|---------|---------|---------|---------|--|
| 125 | 826 | 591 | 5:27.2 | -67:28 | 7X | 5 | 366+319 | 438 | 3L | 146 | .14 | 146 | .14 | 300 | LM60 | 6.0 | 3.0 | 16 | (51) | | | | 1968 | |
| 129 | 825 | 591 | 5:27.2 | -67:28 | 7X | 5 | 308+211 | 924 | 10C | 92 | .14 | 92 | .14 | 158 | LM60 | 6.0 | 3.0 | 16 | (51) | | | | 1968 | |
| 130 | 826 | 589 | 5:27.2 | -67:29 | 7X | 5 | 835+629 | 2076 | 30C | 69* | .14 | 69* | .14 | 118 | LM60 | 6.0 | 3.0 | 16 | (51) | | | | 1968 | |
| 124 | 709 | 586 | 5:27.3 | -69:51 | 5X | 8 | 87 | 83 | 52 | 1L | 52 | .16 | 117 | LM59 | 3.0 | 7.0 | -- | (134) | | | | 1969.71 | | |
| 125 | 710 | 585 | 5:27.3 | -69:51 | 5X | 8 | 224+218 | 172 | 3L | 57 | .16 | 57 | .16 | 128 | LM59 | 3.0 | 7.0 | -- | (134) | | | | 1969.71 | |
| 129 | 710 | 587 | 5:27.3 | -69:51 | 5X | 8 | 105 | 85 | 253 | 10C | 25 | .16 | 47 | LM59 | 3.0 | 7.0 | -- | (134) | | | | 1969.71 | | |
| 130 | 711 | 583 | 5:27.3 | -69:51 | 5X | 8 | 286+228 | 1058 | 30C | 35 | .16 | 35 | .16 | 65 | LM59 | 3.0 | 7.0 | -- | (134) | | | | 1969.71 | |
| 124 | 827 | 587 | 5:27.6 | -67:27 | 45* | | 126 | 101 | 527 | 1L | 527 | .14 | 1080 | LM60.63 | 30.0* | 30 | (51) | | | | | 1947.68 | | |
| 125 | 826 | 589 | 5:27.6 | -67:27 | 47* | | 362+302 | 1466 | 3L | 489 | .14 | 489 | .14 | 1003 | LM60.63 | 30.0* | 30 | (51) | | | | | 1947.68 | |
| 129 | 825 | 590 | 5:27.6 | -67:27 | 43* | | 305+197 | 2061 | 10C | 206 | .14 | 206 | .14 | 352 | LM60.63 | 30.0* | 30 | (51) | | | | | 1947.68 | |
| 130 | 827 | 588 | 5:27.6 | -67:27 | 43* | | 878+574 | 5684 | 30C | 190* | .14 | 190* | .14 | 324 | LM60.63 | 30.0* | 30 | (51) | | | | | 1947.68 | |
| 124 | 824 | 586 | 5:27.8 | -67:30 | 6X | 5 | 104+102 | 78 | 1L | 78 | .14 | 78 | .14 | 160 | LM60.63 | | | 51AC | 69.7 | 0.43 | | | 1947.68 | |
| 125 | 825 | 589 | 5:27.8 | -67:30 | 6X | 5 | 316+310 | 458 | 3L | 153 | .14 | 153 | .14 | 314 | LM60.63 | | | 51AC | 69.7 | 0.22 | | | 1947.68 | |
| 129 | 824 | 589 | 5:27.8 | -67:30 | 6X | 5 | 181+205 | 440 | 10C | 44 | .14 | 44 | .14 | 75 | LM60.63 | | | 51AC | 69.7 | 0.93 | | | 1947.68 | |
| 130 | 826 | 587 | 5:27.8 | -67:30 | 6X | 5 | 830+633 | 958 | 30C | 32* | .14 | 32* | .14 | 54 | LM60.63 | | | 51AC | 69.7 | 1.29 | | | 1947.68 | |
| 124 | 742 | 583 | 5:27.9 | -69:11 | 2X | 2 | 122+119 | -5 | 1L | -5 | .10 | -5 | .10 | -- | (STAR?) | | | 145 | 0.1 | -- | | | | |
| 125 | 743 | 584 | 5:27.9 | -69:11 | 2X | 2 | 375+360 | -42 | 3L | -14 | .10 | -14 | .10 | -- | (STAR?) | | | 145 | 0.1 | -- | | | | |
| 129 | 742 | 584 | 5:27.9 | -69:11 | 2X | 2 | 264+281 | 22 | 10C | 2 | .10 | 2 | .10 | 3 | (STAR?) | | | 145 | 0.1 | 0.03 | | | | |
| 130 | 745 | 580 | 5:27.9 | -69:11 | 2X | 2 | 1017+1001 | 48 | 30C | 2* | .10 | 2* | .10 | 2 | (STAR?) | | | 145 | 0.1 | 0.02 | | | | |
| 124 | 752 | 584 | 5:27.9 | -68:59 | 5X | 6 | 124+110 | 140 | 1L | 140 | .09 | 140 | .09 | 222 | LM61 | 3.0 | 5.0 | 27 | (146) | | | | 1983 | |
| 125 | 752 | 585 | 5:27.9 | -68:59 | 5X | 6 | 417 | 338 | 761 | 3L | 254 | .09 | 404 | LM61 | 3.0 | 5.0 | 27 | (146) | | | | | 1983 | |
| 129 | 752 | 584 | 5:27.9 | -68:59 | 5X | 6 | 432 | 244 | 1176 | 10C | 118 | .09 | 165 | LM61 | 3.0 | 5.0 | 27 | (146) | | | | | 1983 | |
| 130 | 750 | 581 | 5:27.9 | -68:59 | 5X | 6 | 1051 | 917 | 833 | 30C | 28* | .09 | 39 | LM61 | 3.0 | 5.0 | 27 | (146) | | | | | 1983 | |
| 124 | 674 | 582 | 5:28.0 | -70:36 | 5X | 5 | 88 | 81 | 51 | 1L | 51 | .17 | 120 | LM62 | | | 204 | 64.0 | 0.53 | | | | | |
| 125 | 674 | 583 | 5:28.0 | -70:36 | 5X | 5 | 231+209 | 185 | 3L | 62 | .17 | 62 | .17 | 146 | LM62 | | | 204 | 64.0 | 0.44 | | | | |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAC NO. | M | SP |
|-----|-----|-----|--------|--------|-----|----|------|------|-------|-----|------|-----|------|--------|------|-------|-------|-------|------|---------|---------|---|----|
| 129 | 674 | 582 | 5:28.0 | -70:36 | 5X | 5 | 104 | 63 | 270 | 100 | 27 | .17 | 52 | (LH62) | | 204 | | 64.0 | 1.24 | | | | |
| 130 | 675 | 580 | 5:28.0 | -70:36 | 5X | 5 | 273 | 158 | 779 | 300 | 26 | .17 | 49 | (LH62) | | 204 | | 64.0 | 1.30 | | | | |
| 124 | 828 | 585 | 5:28.0 | -67:26 | 4X | 4 | 107 | 104 | 44 | 11 | 44 | .14 | 90 | LH63 | 4.0 | 3.0 | 14 | (51) | | | 1947 | | |
| 125 | 827 | 587 | 5:28.0 | -67:26 | 4X | 4 | 339 | 324 | 388 | 31 | 129 | .14 | 264 | LH63 | 4.0 | 3.0 | 14 | (51) | | | 1947 | | |
| 129 | 826 | 588 | 5:28.0 | -67:26 | 4X | 4 | 312 | 260 | 194 | 100 | 19 | .14 | 33 | LH63 | 4.0 | 3.0 | 14 | (51) | | | 1947 | | |
| 130 | 828 | 586 | 5:28.0 | -67:26 | 4X | 4 | 868 | 757 | 1073 | 300 | 36 | .14 | 61 | LH63 | 4.0 | 3.0 | 14 | (51) | | | 1947 | | |
| 124 | 744 | 582 | 5:28.1 | -69:09 | 17X | 17 | 141 | 90 | 4305 | 11 | 4305 | .10 | 7240 | -- | | (145) | | | | 1984 | 794 | | |
| 125 | 745 | 583 | 5:28.1 | -69:09 | 13X | 16 | 468 | 243 | 11570 | 31 | 3857 | .10 | 6310 | -- | | (145) | | | | 1984 | 794 | | |
| 129 | 744 | 583 | 5:28.1 | -69:09 | 10X | 14 | 454 | 130 | 11164 | 100 | 1116 | .10 | 1640 | | | (145) | | | | 1984 | 794 | | |
| 130 | 745 | 580 | 5:28.1 | -69:09 | 20X | 18 | 1017 | 2581 | 27989 | 300 | 4266 | .10 | 6270 | | | (145) | | | | 1984 | 794 | | |
| 124 | 647 | 579 | 5:28.2 | -71:11 | 2X | 2 | 77 | 75 | 7 | 11 | 7 | .17 | 17 | | | (206) | | | | | | | |
| 125 | 649 | 582 | 5:28.2 | -71:11 | 2X | 2 | 196 | 189 | 26 | 31 | 9 | .17 | 21 | | | (206) | | | | | | | |
| 129 | 648 | 581 | 5:28.2 | -71:11 | 2X | 2 | 41 | 36 | 18 | 100 | 2 | .17 | 3 | | | (206) | | | | | | | |
| 130 | 648 | 579 | 5:28.2 | -71:11 | 3X | 5 | 108 | 84 | 155 | 300 | 5 | .17 | 10 | | | (206) | | | | | | | |
| 124 | 633 | 580 | 5:28.3 | -71:26 | 5X | 3 | 81 | 78 | 19 | 11 | 19 | .17 | 45 | | | 205A | | 7.0 | 0.16 | | | | |
| 125 | 635 | 582 | 5:28.3 | -71:26 | 5X | 3 | 210 | 200 | 40 | 31 | 13 | .17 | 32 | | | 205A | | 7.0 | 0.22 | | | | |
| 129 | 635 | 581 | 5:28.3 | -71:26 | 5X | 3 | 62 | 49 | 69 | 100 | 7 | .17 | 19 | | | 205A | | 7.0 | 0.37 | | | | |
| 130 | 635 | 579 | 5:28.3 | -71:26 | 5X | 3 | 133 | 111 | 109 | 300 | 4 | .17 | 7 | | | 205A | | 7.0 | 1.00 | | | | |
| 124 | 674 | 582 | 5:28.3 | -70:37 | 4X | 4 | 88 | 83 | 27 | 11 | 27 | .17 | 64 | LH62 | 1.5 | 1.5 | 3 | (204) | | | | | |
| 125 | 674 | 582 | 5:28.3 | -70:37 | 4X | 4 | 226 | 215 | 114 | 31 | 38 | .17 | 90 | LH62 | 1.5 | 1.5 | 3 | (204) | | | | | |
| 129 | 674 | 582 | 5:28.3 | -70:37 | 4X | 4 | 104 | 73 | 141 | 100 | 14 | .17 | 28 | LH62 | 1.5 | 1.5 | 3 | (204) | | | | | |
| 130 | 674 | 579 | 5:28.3 | -70:37 | 4X | 4 | 260 | 181 | 533 | 300 | 18 | .17 | 34 | LH62 | 1.5 | 1.5 | 3 | (204) | | | | | |
| 124 | 916 | 590 | 5:28.4 | -65:40 | 2X | 2 | 79 | 75 | 13 | 11 | 13 | .08 | 20 | | | | | | | -- | | | |
| 125 | 917 | 590 | 5:28.4 | -65:40 | 2X | 2 | 202 | 192 | 31 | 31 | 10 | .08 | 16 | | | | | | | -- | | | |
| 129 | 916 | 592 | 5:28.4 | -65:40 | 3X | 6 | 54 | 40 | 147 | 100 | 15 | .08 | 20 | | | | | | | -- | | | |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LM NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|----|----|-----|-----|------|-----|-----|-----|-----|--------|------|-----|-------|-----|------|---------|---------|---|----|
| 130 | 917 | 590 | 5:28.4 | -65:40 | 5X | 7 | 127 | 99 | 623 | 30C | 21 | .08 | 29 | | | | | | | | | | |
| 129 | 969 | 590 | 5:28.6 | -64:40 | 2X | 2 | 44 | 40 | 13 | 10C | 1 | .09 | 2 | | | | | | | | | | |
| 130 | 968 | 591 | 5:28.6 | -64:40 | 2X | 3 | 101 | 94 | 42 | 30C | 1 | .09 | 2 | | | | | | | | | | |
| 124 | 728 | 579 | 5:29.0 | -69:29 | 4X | 4 | 90 | 83 | 65 | 1L | 65 | .15 | 140 | | | | | | | | | | |
| 129 | 729 | 579 | 5:29.0 | -69:29 | 3X | 3 | 95 | 76 | 115 | 10C | 12 | .15 | 21 | | | | | | | | | | |
| 130 | 729 | 577 | 5:29.0 | -69:29 | 5X | 9 | 273 | 205 | 1221 | 30C | 41 | .15 | 73 | | | | | | | | | | |
| 124 | 750 | 579 | 5:29.1 | -69:03 | 3X | 3 | 111 | 109 | 9 | 1L | 9 | .10 | 15 | (LM61) | | | 146 | 1.6 | 0.11 | 1983 | | | |
| 125 | 749 | 578 | 5:29.1 | -69:03 | 3X | 3 | 322 | 313 | 21 | 3L | 7 | .10 | 12 | (LM61) | | | 146 | 1.6 | 0.13 | 1983 | | | |
| 129 | 750 | 578 | 5:29.1 | -69:03 | 3X | 3 | 223 | 214 | 40 | 10C | 4 | .10 | 6 | (LM61) | | | 146 | 1.6 | 0.27 | 1983 | | | |
| 130 | 749 | 576 | 5:29.1 | -69:03 | 3X | 3 | 812 | 787 | 72 | 30C | 2 | .10 | 4 | (LM61) | | | 146 | 1.6 | 0.46 | 1983 | | | |
| 124 | 774 | 579 | 5:29.2 | -68:30 | 3X | 5 | 86 | 79 | 72 | 1L | 72 | .10 | 121 | | | | | | | | | | |
| 125 | 776 | 580 | 5:29.2 | -68:30 | 4X | 6 | 226 | 204 | 264 | 3L | 88 | .10 | 148 | | | | | | | | | | |
| 129 | 775 | 579 | 5:29.2 | -68:30 | 5X | 5 | 90 | 53 | 533 | 10C | 53 | .10 | 77 | | | | | | | | | | |
| 130 | 776 | 577 | 5:29.2 | -68:30 | 7X | 8 | 246 | 129 | 2300 | 30C | 77 | .10 | 103 | | | | | | | | | | |
| 124 | 762 | 577 | 5:29.4 | -68:47 | 3X | 6 | 118 | 95 | 350 | 1L | 350 | .09 | 556 | LM64 | 8.0 | 5.0 | 37 | | | 2001 | | | |
| 125 | 764 | 578 | 5:29.4 | -68:47 | 9X | 6 | 364 | 255 | 1509 | 3L | 503 | .09 | 800 | LM64 | 8.0 | 5.0 | 37 | | | 2001 | | | |
| 129 | 763 | 578 | 5:29.4 | -68:47 | 9X | 6 | 327 | 120 | 2517 | 10C | 252 | .09 | 354 | LM64 | 8.0 | 5.0 | 37 | | | 2001 | | | |
| 130 | 762 | 575 | 5:29.4 | -68:47 | 9X | 6 | 616 | 384 | 6310 | 30C | 210 | .09 | 296 | LM64 | 8.0 | 5.0 | 37 | | | 2001 | | | |
| 124 | 664 | 575 | 5:29.9 | -70:50 | 4X | 3 | 92 | 76 | 113 | 1L | 113 | .17 | 267 | -- | | | (206) | | | 2010 | | | |
| 125 | 665 | 576 | 5:29.9 | -70:50 | 5X | 7 | 239 | 200 | 540 | 3L | 180 | .17 | 425 | -- | | | (206) | | | 2010 | | | |
| 129 | 664 | 575 | 5:29.9 | -70:50 | 8X | 12 | 115 | 39 | 2080 | 10C | 208 | .17 | 400 | -- | | | (206) | | | 2010 | | | |
| 130 | 664 | 573 | 5:29.9 | -70:50 | 6X | 9 | 346 | 93 | 4170 | 30C | 139 | .17 | 266 | -- | | | (206) | | | 2010 | | | |
| 124 | 852 | 577 | 5:30.1 | -66:57 | 4X | 4 | 101 | 101 | 26 | 1L | 26 | .08 | 39 | LM65 | 2.0 | 2.0 | 5 | | | (LM77) | | | |
| 125 | 851 | 579 | 5:30.1 | -66:57 | 4X | 4 | 264 | 266 | 44 | 3L | 15 | .08 | 23 | LM65 | 2.0 | 2.0 | 5 | | | (LM77) | | | |
| 129 | 850 | 578 | 5:30.1 | -66:57 | 4X | 4 | 157 | 153 | 2 | 10C | 0 | .08 | 0 | LM65 | 2.0 | 2.0 | 5 | | | (LM77) | | | |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | B.G. | V | E.F | V/E | RE | UF | LM NO. | SIZE | BS | N NO. | HA | H1 | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|-------|---------|---------|-------|------|-------|------|------|------|-----------|-------|-----|---------------|------|----|---------|---------|---|----|
| 130 | 852 | 576 | 5:30.1 | -66:57 | 4X | 4 | 682*619 | -28 | 30C | -1* | .08* | -- | -- | LM65 | 2.0 | 2.0 | 5 | | | (LM77) | | | |
| 124 | 835 | 574 | 5:30.3 | -67:17 | 10X | 7 | 116 | 89 | 863 | 1L | 863 | .06 | 1173 | (LM70) | | | (54) | | | | 2004 | | |
| 125 | 836 | 575 | 5:30.3 | -67:17 | 11X11 | 368 | 240 | 4120 | 3L | 1373 | .06 | 1868 | | (LM70) | | | (54) | | | | 2004 | | |
| 130 | 836 | 573 | 5:30.3 | -67:17 | 19X15 | 887 | 318 | 47000 | 30C | 1567* | .06 | 1963 | | (LM70) | | | (54) | | | | 2004 | | |
| 124 | 731 | 569 | 5:30.8 | -69:27 | 4X | 4 | 89 | 84 | 55 | 1L | 55 | .16 | 124 | | | | | | | | -- | | |
| 125 | 730 | 572 | 5:30.8 | -69:27 | 3X | 6 | 241 | 223 | 179 | 3L | 60 | .16 | 135 | | | | | | | | -- | | |
| 129 | 731 | 570 | 5:30.8 | -69:27 | 4X | 4 | 106 | 75 | 297 | 10C | 30 | .16 | 55 | | | | | | | | -- | | |
| 130 | 731 | 568 | 5:30.8 | -69:27 | 5X | 7 | 306 | 235 | 1020 | 30C | 34 | .16 | 63 | | | | | | | | -- | | |
| 124 | 652 | 569 | 5:30.9 | -71:05 | 4X | 5 | 99* | 94 | 21 | 1L | 21 | .17 | 50 | LM66 | 1.0 | 4.0 | 4 | | | | | | |
| 125 | 652 | 571 | 5:30.9 | -71:05 | 4X | 5 | 246*250 | 121 | 3L | 40 | .17 | 95 | | LM66 | 1.0 | 4.0 | 4 | | | | | | |
| 129 | 653 | 570 | 5:30.9 | -71:05 | 4X | 5 | 141*125 | 121 | 10C | 12 | .17 | 23 | | LM66 | 1.0 | 4.0 | 4 | | | | | | |
| 130 | 653 | 568 | 5:30.9 | -71:05 | 4X | 5 | 407*354 | 254 | 30C | 8 | .17 | 16 | | LM66 | 1.0 | 4.0 | 4 | | | | | | |
| 124 | 763 | 569 | 5:31.1 | -68:45 | 5X | 5 | 122 | 90 | 341 | 1L | 341 | .20 | 935 | (LM64,68) | | | | | | | 2001? | | |
| 125 | 764 | 571 | 5:31.1 | -68:45 | 8X | 8 | 373 | 235 | 2020 | 3L | 673 | .20 | 1845 | (LM64,68) | | | | | | | 2001? | | |
| 124 | 651 | 567 | 5:31.3 | -71:07 | 15X17 | 102* | 77 | 1195 | 1L | 1195 | .17 | 2820 | | (LM66,69) | | | 206.A-01395.3 | 0.50 | | | | | |
| 125 | 650 | 569 | 5:31.3 | -71:07 | 15X17 | 228*199 | 3246 | 3L | 1082 | .17 | 2555 | | | (LM66,69) | | | 206.A-01395.3 | 0.54 | | | | | |
| 129 | 653 | 568 | 5:31.3 | -71:07 | 15X17 | 207 | 48 | 4308 | 10C | 431 | .17 | 829 | | (LM66,69) | | | 206.A-01395.3 | 1.68 | | | | | |
| 130 | 651 | 565 | 5:31.3 | -71:07 | 15X17 | 312*108 | 14665 | 30C | 489* | .17 | 936 | | | (LM66,69) | | | 206.A-01395.3 | 1.49 | | | | | |
| 129 | 850 | 572 | 5:31.3 | -67:01 | 11X15 | 262 | 112 | 8200 | 10C | 820 | .10 | 1205 | | (LM77) | | | | | | | 2006 | | |
| 130 | 850 | 570 | 5:31.3 | -67:01 | 11X17 | 849 | 371 | 26100 | 30C | 870* | .10 | 1280 | | (LM77) | | | | | | | 2006 | | |
| 124 | 652 | 567 | 5:31.5 | -71:04 | 42* | 107 | 87 | 190 | 1L | 190 | .17 | 458 | | LM66,69 | 19.0* | 25 | (206) | | | | | | |
| 125 | 653 | 569 | 5:31.5 | -71:04 | 42* | 300 | 233 | 572 | 3L | 191 | .17 | 451 | | LM66,69 | 19.0* | 25 | (206) | | | | | | |
| 129 | 653 | 568 | 5:31.5 | -71:04 | 46* | 207 | 87 | 1118 | 10C | 112 | .17 | 214 | | LM66,69 | 19.0* | 25 | (206) | | | | | | |
| 130 | 653 | 564 | 5:31.5 | -71:04 | 50* | 485*216 | 4152 | 30C | 138 | .17 | 266 | | | LM66,69 | 19.0* | 25 | (206) | | | | | | |
| 124 | 738 | 568 | 5:31.5 | -69:18 | 4X | 6 | 102 | 98 | 38 | 1L | 38 | .14 | 78 | LM67 | 2.0 | 5.0 | 15 | | | | | | |

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| FR. | X | Y | R.A. | DEC. | *X*Y | P | BG | V | E.F | V/E | RE | UF | LM NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|--------------|-----------|------|------|------|------|------|-----------|--------|------|----|--------|------|------|---------|---------|---|----|
| 125 | 738 | 568 | 5:31.5 | -69:18 | 4X 6 294 | 269 | 279 | 3L | 93 | .14 | 191 | LM67 | 2.0 | 5.0 | 15 | | | | | | | |
| 129 | 737 | 568 | 5:31.5 | -69:18 | 4X 6 171*146 | | 278 | 10C | 28 | .14 | 48 | LM67 | 2.0 | 5.0 | 15 | | | | | | | |
| 130 | 738 | 565 | 5:31.5 | -69:18 | 4X 6 634*486 | | 888 | 30C | 30* | .14 | 51 | LM67 | 2.0 | 5.0 | 15 | | | | | | | |
| 124 | 738 | 568 | 5:31.6 | -69:17 | 9X10 102 | 85 | 703 | 1L | 703 | .14 | 1440 | (LM67,74) | | | | 2015 | | | | | | |
| 125 | 738 | 568 | 5:31.6 | -69:17 | 15X16 294 | 228 | 4577 | 3L | 1526 | .14 | 3125 | (LM67,74) | | | | 2015 | | | | | | |
| 129 | 739 | 567 | 5:31.6 | -69:17 | 12X17 186 | 82 | 7700 | 10C | 770 | .14 | 1320 | (LM67,74) | | | | 2015 | | | | | | |
| 130 | 739 | 565 | 5:31.6 | -69:17 | 12X18 683 | 250*24506 | 30C | | 817* | .14 | 1400 | (LM67,74) | | | | 2015 | | | | | | |
| 124 | 761 | 568 | 5:31.7 | -68:50 | 5X 3 99* | 99 | 16 | 1L | 16 | .20 | 44 | LM68 | 3.0 | 1.0 | -- | | | | | | | |
| 125 | 759 | 567 | 5:31.7 | -68:50 | 5X 3 233*227 | | 40 | 3L | 13 | .20 | 36 | LM68 | 3.0 | 1.0 | -- | | | | | | | |
| 129 | 759 | 567 | 5:31.7 | -68:50 | 5X 3 84 | 84 | 18 | 10C | 2 | .20 | 4 | LM68 | 3.0 | 1.0 | -- | | | | | | | |
| 130 | 759 | 564 | 5:31.7 | -68:50 | 5X 3 224*219 | | 58 | 30C | 2 | .20 | 4 | LM68 | 3.0 | 1.0 | -- | | | | | | | |
| 124 | 892 | 570 | 5:31.8 | -66:07 | 3X 3 84 | 79 | 25 | 1L | 25 | .07 | 36 | | | | | | | | | | | |
| 125 | 896 | 572 | 5:31.8 | -66:07 | 4X 5 215 | 201 | 162 | 3L | 54 | .07 | 77 | | | | | | | | | | | |
| 129 | 893 | 572 | 5:31.8 | -66:07 | 5X 5 69 | 53 | 245 | 10C | 25 | .07 | 32 | | | | | | | | | | | |
| 130 | 894 | 570 | 5:31.9 | -66:07 | 6X 7 181 | 133 | 970 | 30C | 32 | .07 | 42 | | | | | | | | | | | |
| 124 | 739 | 566 | 5:31.9 | -69:16 | 48* | 100* | 94 | 165 | 1L | .14 | 338 | LM67,74 | 25.0* | 28 | | 2015 | | | | | | |
| 125 | 739 | 566 | 5:31.9 | -69:16 | 48* | 284 | 257 | 916 | 3L | .14 | 625 | LM67,74 | 25.0* | 28 | | 2015 | | | | | | |
| 129 | 739 | 566 | 5:31.9 | -69:16 | 48* | 186*129 | | 1311 | 10C | .14 | 224 | LM67,74 | 25.0* | 28 | | 2015 | | | | | | |
| 130 | 739 | 563 | 5:31.9 | -69:16 | 48* | 602*405 | | 4350 | 30C | .14 | 248 | LM67,74 | 25.0* | 28 | | 2015 | | | | | | |
| 124 | 652 | 565 | 5:32.0 | -71:04 | 5X 6 95* | 88 | 111 | 1L | 111 | .17* | 262 | LM69 | 3.0 | 5.0 | 21 | (206) | | | | | | |
| 125 | 653 | 567 | 5:32.0 | -71:04 | 5X 6 266*233 | | 494 | 3L | 165 | .17* | 390 | LM69 | 3.0 | 5.0 | 21 | (206) | | | | | | |
| 129 | 653 | 565 | 5:32.0 | -71:04 | 5X 6 102* | 98 | 245 | 10C | 25 | .17* | 47 | LM69 | 3.0 | 5.0 | 21 | (206) | | | | | | |
| 130 | 653 | 563 | 5:32.0 | -71:04 | 5X 6 342*284 | | 1393 | 30C | 46 | .17* | 89 | LM69 | 3.0 | 5.0 | 21 | (206) | | | | | | |
| 124 | 772 | 566 | 5:32.0 | -68:34 | 5X 4 90 | 88 | 12 | 1L | 12 | .20 | 33 | (LM71) | | | | 1488-E | 21.4 | 0.65 | | | | |
| 125 | 773 | 566 | 5:32.0 | -68:34 | 5X 4 241*235 | | 62 | 3L | 21 | .20 | 57 | (LM71) | | | | 1488-E | 21.4 | 0.37 | | | | |

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| FR | X | Y | R.A. | DEC. | *X*Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NOC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|------|------|------|------|-----|------|------|------|--------|------|-----|---------|-------|------|-------------|---------|---|----|
| 129 | 773 | 567 | 5:32.0 | -68:34 | 5X 4 | 120 | 93 | 145 | 10C | 15 | .20 | 31 | (LH71) | | | 1480-E | 21.4 | 0.69 | | | | |
| 130 | 774 | 565 | 5:32.0 | -68:34 | 5X 4 | 353 | 254 | 412 | 30C | 14 | .20 | 30 | (LH71) | | | 1480-E | 21.4 | 0.72 | | | | |
| 125 | 823 | 567 | 5:32.0 | -67:33 | 8X 8 | 310 | 251 | 2069 | 3L | 956 | .10 | 1608 | -- | | | (57.58) | | | 2011 | | | |
| 129 | 823 | 567 | 5:32.0 | -67:33 | 7X 6 | 226 | 112 | 1690 | 10C | 169 | .10 | 248 | -- | | | (57.58) | | | 2011 | | | |
| 130 | 823 | 565 | 5:32.0 | -67:33 | 6X 9 | 817 | 483 | 5400 | 30C | 180* | .10 | 265 | -- | | | (57.58) | | | 2011 | | | |
| 124 | 829 | 569 | 5:32.0 | -67:23 | 5X 8 | 96* | 93 | 39 | 1L | 39 | .06* | 53 | LH70 | 4.0 | 7.0 | 10 | | | | | | |
| 125 | 831 | 568 | 5:32.0 | -67:23 | 5X 8 | 264* | 256 | 111 | 3L | 37 | .06* | 50 | LH70 | 4.0 | 7.0 | 10 | | | | | | |
| 129 | 830 | 569 | 5:32.0 | -67:23 | 5X 8 | 147 | 119 | 383 | 10C | 38 | .06* | 48 | LH70 | 4.0 | 7.0 | 10 | | | | | | |
| 130 | 831 | 567 | 5:32.0 | -67:23 | 5X 8 | 511 | 381 | 1358 | 30C | 45 | .06* | 57 | LH70 | 4.0 | 7.0 | 10 | | | | | | |
| 124 | 764 | 564 | 5:32.1 | -68:42 | 5X 5 | 87* | 88 | -21 | 1L | -21 | .20 | -- | (LH73) | | | 1481 | 19.2 | -- | | | | |
| 125 | 765 | 565 | 5:32.1 | -68:42 | 5X 5 | 229* | 232 | -94 | 3L | -31 | .20 | -- | (LH73) | | | 1481 | 19.2 | -- | | | | |
| 129 | 766 | 564 | 5:32.1 | -68:42 | 5X 5 | 77* | 80 | -2 | 10C | 0 | .20 | -- | (LH73) | | | 1481 | 19.2 | -- | | | | |
| 130 | 765 | 563 | 5:32.1 | -68:42 | 5X 5 | 207* | 253 | -876 | 30C | -29 | .20 | -- | (LH73) | | | 1481 | 19.2 | -- | | | | |
| 124 | 815 | 567 | 5:32.1 | -67:44 | 7X 7 | 120* | 103 | 243 | 1L | 243 | .09 | 386 | (LH76) | | | 57AE | 336.3 | 0.87 | 2014 | | | |
| 125 | 814 | 566 | 5:32.1 | -67:44 | 7X 7 | 314* | 275* | 1107 | 3L | 369 | .09 | 587 | (LH76) | | | 57AE | 336.3 | 0.57 | 2014 | | | |
| 129 | 815 | 567 | 5:32.1 | -67:44 | 7X 7 | 346* | 170 | 2416 | 10C | 242 | .09 | 341 | (LH76) | | | 57AE | 336.3 | 0.99 | 2014 | | | |
| 130 | 815 | 565 | 5:32.1 | -67:44 | 7X 7 | 897* | 531 | 4652 | 30C | 155* | .09 | 219 | (LH76) | | | 57AE | 336.3 | 1.54 | 2014 | | | |
| 124 | 877 | 568 | 5:32.1 | -66:27 | 7X 5 | 104 | 95 | 72 | 1L | 72 | .05* | 94 | LH72 | 6.0 | 3.0 | 16 | (55) | | | | | |
| 125 | 879 | 570 | 5:32.1 | -66:27 | 7X 5 | 294* | 262 | 434 | 3L | 145 | .05* | 189 | LH72 | 6.0 | 3.0 | 16 | (55) | | | | | |
| 129 | 877 | 569 | 5:32.1 | -66:27 | 7X 5 | 220 | 129 | 879 | 10C | 88 | .05* | 106 | LH72 | 6.0 | 3.0 | 16 | (55) | | | | | |
| 130 | 878 | 567 | 5:32.1 | -66:27 | 7X 5 | 710 | 396 | 3377 | 30C | 113* | .05* | 136 | LH72 | 6.0 | 3.0 | 16 | (55) | | | | | |
| 124 | 709 | 565 | 5:32.2 | -69:55 | 5X 5 | 125 | 80 | 502 | 1L | 502 | .05 | 653 | | | | | | | 269696M10.7 | B | | |
| 125 | 710 | 566 | 5:32.2 | -69:55 | 8X10 | 378 | 266 | 2247 | 3L | 749 | .05 | 975 | | | | | | | 269696M10.7 | B | | |
| 129 | 709 | 566 | 5:32.2 | -69:55 | 7X 8 | 228 | 51 | 3240 | 10C | 324 | .05 | 392 | | | | | | | 269696M10.7 | B | | |
| 130 | 709 | 563 | 5:32.2 | -69:55 | 9X 9 | 545 | 127 | 9950 | 30C | 332 | .05 | 401 | | | | | | | 269696M10.7 | B | | |

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| PR. | X | Y | P.A. | DEC. | X | Y | BO | V | E.F | V/E | RE | UF | LM NO. | SIZE | BS | N NO. | HA | HI | NOC NO. | SAC NO. | M | SP |
|-----|-----|-----|--------|--------|-----|----|---------|-------|-----|--------|--------|------|--------|------|-----|---------|-------|------|---------|---------|-----------|----|
| 124 | 773 | 565 | 5:32.2 | -68:33 | 4X | 5 | 90 | 87 | 26 | IL | 26.20 | 71 | LM71 | 2.0 | 3.0 | -- | (148) | | | | | |
| 125 | 774 | 565 | 5:32.2 | -68:33 | 4X | 5 | 236+229 | 90 | 3L | 30.20 | 82 | LM71 | 2.0 | 3.0 | -- | (148) | | | | | | |
| 129 | 773 | 566 | 5:32.2 | -68:33 | 4X | 5 | 120 | 91 | 156 | 10C | 16.20 | 34 | LM71 | 2.0 | 3.0 | -- | (148) | | | | | |
| 130 | 773 | 565 | 5:32.2 | -68:33 | 4X | 5 | 329+251 | 559 | 30C | 19.20 | 40 | LM71 | 2.0 | 3.0 | -- | (148) | | | | | | |
| 124 | 877 | 568 | 5:32.3 | -66:28 | 8X | 6 | 104 | 93 | 125 | IL | 125.05 | 162 | LM72 | | | 55.1A | 173.3 | 1.07 | | | | |
| 125 | 878 | 570 | 5:32.3 | -66:28 | 8X | 6 | 296 | 247 | 606 | 3L | 202.05 | 262 | LM72 | | | 55.1A | 173.3 | 0.66 | | | | |
| 129 | 876 | 568 | 5:32.3 | -66:28 | 8X | 6 | 177+113 | 809 | 10C | 81.05 | 98 | LM72 | | | | 55.1A | 173.3 | 1.77 | | | | |
| 130 | 877 | 566 | 5:32.3 | -66:28 | 8X | 6 | 609+327 | 4755 | 30C | 158+05 | 192 | LM72 | | | | 55.1A | 173.3 | 0.91 | | | | |
| 124 | 740 | 564 | 5:32.4 | -69:14 | 5X | 6 | 100 | 94 | 55 | IL | 55.14 | 113 | LM74 | 3.0 | 5.0 | 13 | | | | | 2015 | |
| 125 | 740 | 564 | 5:32.4 | -69:14 | 5X | 6 | 288+260 | 358 | 3L | 119.14 | 244 | LM74 | 3.0 | 5.0 | 13 | | | | | | 2015 | |
| 129 | 740 | 565 | 5:32.4 | -69:14 | 5X | 6 | 195 | 145 | 471 | 10C | 47.14 | 81 | LM74 | 3.0 | 5.0 | 13 | | | | | 2015 | |
| 130 | 740 | 561 | 5:32.4 | -69:14 | 5X | 6 | 536+24 | 1643 | 30C | 55.14 | 94 | LM74 | 3.0 | 5.0 | 13 | | | | | | 2015 | |
| 124 | 764 | 565 | 5:32.4 | -68:41 | 5X | 5 | 87 | 90 | -37 | IL | -37.20 | -- | LM73 | 3.0 | 3.0 | -- | (148) | | | | | |
| 125 | 766 | 564 | 5:32.4 | -68:41 | 5X | 5 | 228+228 | 2 | 3L | 1.20 | 2 | LM73 | 3.0 | 3.0 | -- | (148) | | | | | | |
| 129 | 766 | 564 | 5:32.4 | -68:41 | 5X | 5 | 77 | 80 | -2 | 10C | 0.20 | -- | LM73 | 3.0 | 3.0 | -- | (148) | | | | | |
| 130 | 766 | 562 | 5:32.4 | -68:41 | 5X | 5 | 201+220 | -61 | 30C | -2.20 | -- | LM73 | 3.0 | 3.0 | -- | (148) | | | | | | |
| 124 | 816 | 565 | 5:32.5 | -67:43 | 11X | 11 | 134 | 94 | 908 | IL | 908.09 | 1445 | LM76 | | | 57.1A-E | 711.6 | 0.49 | 2014 | | | |
| 125 | 814 | 565 | 5:32.5 | -67:43 | 11X | 11 | 298+250 | 2788 | 3L | 929.09 | 1477 | LM76 | | | | 57.1A-E | 711.6 | 0.48 | 2014 | | | |
| 129 | 813 | 565 | 5:32.5 | -67:43 | 11X | 11 | 125+108 | 3533 | 10C | 353.09 | 498 | LM76 | | | | 57.1A-E | 711.6 | 1.43 | 2014 | | | |
| 130 | 815 | 563 | 5:32.5 | -67:43 | 11X | 11 | 722+326 | 18501 | 30C | 417+09 | 588 | LM76 | | | | 57.1A-E | 711.6 | 1.21 | 2014 | | | |
| 124 | 816 | 565 | 5:32.6 | -67:42 | 5X | 7 | 134 | 109 | 217 | IL | 217.09 | 345 | LM76 | 3.5 | 6.0 | 34 | (57) | | | | 2014 | |
| 125 | 815 | 564 | 5:32.6 | -67:42 | 5X | 7 | 310+289 | 567 | 3L | 189.09 | 300 | LM76 | 3.5 | 6.0 | 34 | (57) | | | | | 2014 | |
| 129 | 814 | 565 | 5:32.6 | -67:42 | 5X | 7 | 207+178 | 1924 | 10C | 192.09 | 270 | LM76 | 3.5 | 6.0 | 34 | (57) | | | | | 2014 | |
| 130 | 816 | 564 | 5:32.6 | -67:42 | 5X | 7 | 917+576 | 3875 | 30C | 123+09 | 182 | LM76 | 3.5 | 6.0 | 34 | (57) | | | | | 2014 | |
| 124 | 823 | 562 | 5:32.6 | -67:32 | 5X | 5 | 104+102 | 24 | IL | 24.11 | 42 | LM75 | 3.0 | 3.0 | -- | (58) | | | | | (LM78.79) | |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LM NO. | SIZE | BS | N NO. | HA | H | NGC NO. | SAD NO. | M | SP | |
|-----|-----|-----|--------|--------|------|----|---------|-----|-------|-----|----------|------|------|--------------|-----------|-----|-------|------|-------|---------|---------|---|---------|-----------|
| 174 | 874 | 563 | 5:32.6 | -67:32 | 5X | 5 | 300*287 | | 102 | 3L | 34 | .11* | 60 | LM75 | 3.0 | 3.0 | -- | (58) | | | | | | (LM78.79) |
| 175 | 874 | 563 | 5:32.6 | -67:32 | 5X | 5 | 196*178 | | 73 | 10C | 7 | .11* | 11 | LM75 | 3.0 | 3.0 | -- | (58) | | | | | | (LM78.79) |
| 140 | 874 | 561 | 5:32.6 | -67:32 | 5X | 5 | 637*563 | | 754 | 30C | 25*.11* | | 38 | LM75 | 3.0 | 3.0 | -- | (58) | | | | | | (LM78.79) |
| 174 | 874 | 564 | 5:32.7 | -70:28 | 2X | 2 | 81 | 76 | 19 | 1L | 19 | .18 | 47 | | | | | | | | | | -- | |
| 174 | 874 | 564 | 5:32.7 | -70:28 | 2X | 3 | 205 | 200 | 19 | 3L | 6 | .18 | 16 | | | | | | | | | | -- | |
| 174 | 874 | 564 | 5:32.7 | -70:28 | 2X | 2 | 49 | 37 | 45 | 10C | 5 | .18 | 9 | | | | | | | | | | -- | |
| 140 | 874 | 562 | 5:32.7 | -70:28 | 2X | 3 | 121 | 93 | 142 | 30C | 5 | .18 | 9 | | | | | | | | | | -- | |
| 174 | 874 | 562 | 5:32.8 | -67:31 | 3X | 3 | 104*103 | | 10 | 1L | 10 | .11 | 18 | (LM75.78.79) | | | 58 | 1.8 | 0.10 | 2021 | | | | |
| 174 | 874 | 562 | 5:32.8 | -67:31 | 3X | 3 | 306 | 293 | 54 | 3L | 18 | .11 | 32 | (LM75.78.79) | | | 58 | 1.8 | 0.06 | 2021 | | | | |
| 174 | 874 | 561 | 5:32.8 | -67:31 | 3X | 3 | 212 | 182 | 115 | 10C | 12 | .11 | 18 | (LM75.78.79) | | | 58 | 1.8 | 0.10 | 2021 | | | | |
| 140 | 874 | 560 | 5:32.8 | -67:31 | 3X | 3 | 686 | 613 | 276 | 30C | 9*.11 | | 14 | (LM75.78.79) | | | 58 | 1.8 | 0.12 | 2021 | | | | |
| 174 | 778 | 561 | 5:33.0 | -68:25 | 2X | 2 | 82*82 | | 0 | 1L | 0 | .20 | -- | | | | 148A | 1.1 | -- | | | | | |
| 174 | 779 | 561 | 5:33.0 | -68:25 | 2X | 2 | 208*210 | | 9 | 3L | 3 | .20 | 8 | | | | 148A | 1.1 | 0.13* | | | | | |
| 174 | 779 | 567 | 5:33.0 | -68:25 | 2X | 2 | 56*55 | | 4 | 10C | 0 | .20 | 1 | | | | 148A | 1.1 | 1.28* | | | | | |
| 140 | 779 | 560 | 5:33.0 | -68:25 | 2X | 2 | 123*133 | | 21 | 30C | 1 | .20 | 2 | | | | 148A | 1.1 | 0.73 | | | | | |
| 174 | 871 | 562 | 5:33.0 | -66:56 | 294* | | 103*94 | | 2658 | 1L | 2658 | .11 | 4700 | LM65.77.84 | 349.0*181 | | | | | | | | 2002-34 | |
| 174 | 871 | 560 | 5:33.0 | -66:56 | 220* | | 316*255 | | 11154 | 3L | 3718 | .11 | 6480 | LM65.77.84 | 349.0*181 | | | | | | | | 2002-34 | |
| 174 | 871 | 563 | 5:33.0 | -66:56 | 283* | | 183*134 | | 17434 | 10C | 1743 | .11 | 7665 | LM65.77.84 | 349.0*181 | | | | | | | | 2002-34 | |
| 140 | 872 | 560 | 5:33.0 | -66:56 | 230* | | 656*424 | | 66870 | 30C | 2229*.11 | | 3410 | LM65.77.84 | 349.0*181 | | | | | | | | 2002-34 | |
| 174 | 670 | 562 | 5:33.1 | -71:46 | 5X | 4 | 78 | 73 | 63 | 1L | 63 | .19 | 164 | -- | | | | | | | | | 2025 | |
| 174 | 670 | 562 | 5:33.1 | -71:46 | 3X | 4 | 241 | 184 | 344 | 3L | 115 | .19 | 300 | -- | | | | | | | | | 2025 | |
| 174 | 672 | 563 | 5:33.1 | -71:46 | 3X | 3 | 44 | 30 | 89 | 10C | 9 | .19 | 19 | -- | | | | | | | | | 2025 | |
| 140 | 672 | 560 | 5:33.1 | -71:46 | 3X | 5 | 106 | 76 | 275 | 30C | 9 | .19 | 19 | -- | | | | | | | | | 2025 | |
| 174 | 713 | 561 | 5:33.3 | -69:48 | 2X | 2 | 79*79 | | 2 | 1L | 2 | .20 | 5 | | | | 149AB | 1.9 | 0.3* | | | | | |
| 175 | 713 | 561 | 5:33.3 | -69:48 | 2X | 2 | 212*212 | | 4 | 3L | 1 | .20 | 4 | | | | 149AB | 1.9 | 0.52* | | | | | |

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| FR. | X | Y | P.A. | SEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAC NO. | M | SP |
|-----|-----|-----|--------|--------|----------------|----------|----------|----|-------|-----|-------|------|------|------------|----------|-----|-------|-----|-------|-----------|---------|---|----|
| 129 | 713 | 560 | 5:33.3 | -69:48 | 2X | 2 | 55* 56 | | 3 | 10C | 0 | .20 | 1 | | | | 149AB | 1.9 | 2.98* | | | | |
| 130 | 714 | 558 | 5:33.3 | -69:48 | 2X | 2 | 139* 137 | | -2 | 30C | 0 | .20 | -- | | | | 149AB | 1.9 | -- | | | | |
| 124 | 825 | 559 | 5:33.3 | -67:30 | 73* | 103* | 93 | | 241 | 1L | 241 | .11 | 426 | LH75.78.79 | 46.0* | 28 | (58) | | | 2021 | | | |
| 125 | 825 | 561 | 5:33.3 | -67:30 | 63* | 305* 262 | | | 619 | 3L | 206 | .11 | 365 | LH75.78.79 | 46.0* | 28 | (58) | | | 2021 | | | |
| 129 | 825 | 560 | 5:33.3 | -67:30 | 68* | 184* 119 | | | 1386 | 10C | 139 | .11 | 212 | LH75.78.79 | 46.0* | 28 | (58) | | | 2021 | | | |
| 130 | 825 | 558 | 5:33.3 | -67:30 | 70* | 526* 393 | | | 3630 | 30C | 121* | .11 | 185 | LH75.78.79 | 46.0* | 28 | (58) | | | 2021 | | | |
| 124 | 843 | 560 | 5:33.3 | -66:59 | 7437* 108* | 96 | | | 2183 | 1L | 2183 | .11 | 3870 | LH77 | 5.0 60.0 | 138 | | | | 2002-34 | | | |
| 125 | 843 | 562 | 5:33.3 | -66:59 | 7437* 310* 262 | | | | 9731 | 3L | 3244 | .11 | 5750 | LH77 | 5.0 60.0 | 138 | | | | 2002-34 | | | |
| 129 | 850 | 560 | 5:33.3 | -66:59 | 7437* 216* 136 | | | | 16309 | 10C | 1631 | .11 | 2490 | LH77 | 5.0 60.0 | 138 | | | | 2002-34 | | | |
| 130 | 850 | 558 | 5:33.3 | -66:59 | 7437* 777* 423 | | | | 66852 | 30C | 2228* | .11 | 3410 | LH77 | 5.0 60.0 | 138 | | | | 2002-34 | | | |
| 124 | 823 | 558 | 5:33.6 | -67:31 | 5X | 5 | 98* 96 | | 22 | 1L | 22 | .11* | 39 | LH78 | 4.0 4.0 | 13 | (58) | | | (LH75.79) | | | |
| 125 | 824 | 561 | 5:33.6 | -67:31 | 5X | 5 | 290* 278 | | 38 | 3L | 13 | .11* | 23 | LH78 | 4.0 4.0 | 13 | (58) | | | (LH75.79) | | | |
| 129 | 823 | 560 | 5:33.6 | -67:31 | 5X | 5 | 155* 145 | | 384 | 10C | 38 | .11* | 58 | LH78 | 4.0 4.0 | 13 | (58) | | | (LH75.79) | | | |
| 130 | 823 | 558 | 5:33.6 | -67:31 | 5X | 5 | 430* 437 | | 142 | 30C | 5* | .11* | 7 | LH78 | 4.0 4.0 | 13 | (58) | | | (LH75.79) | | | |
| 124 | 828 | 558 | 5:33.7 | -67:27 | 8X | 5 | 92* 91 | | 87 | 1L | 87 | .12* | 162 | LH79 | 7.0 3.0 | 15 | (58) | | | 2021 | | | |
| 125 | 827 | 560 | 5:33.7 | -67:27 | 8X | 5 | 279 258 | | 293 | 3L | 98 | .12* | 182 | LH79 | 7.0 3.0 | 15 | (58) | | | 2021 | | | |
| 129 | 827 | 559 | 5:33.7 | -67:27 | 8X | 5 | 137* 120 | | 259 | 10C | 26 | .12* | 41 | LH79 | 7.0 3.0 | 15 | (58) | | | 2021 | | | |
| 130 | 827 | 557 | 5:33.7 | -67:27 | 8X | 5 | 448* 379 | | 1438 | 30C | 48* | .12* | 76 | LH79 | 7.0 3.0 | 15 | (58) | | | 2021 | | | |
| 124 | 762 | 557 | 5:34.0 | -68:47 | 2X | 3 | 83* 83 | | 4 | 1L | 4 | .30 | 18 | | | | 150 | 2.7 | 0.15* | | | | |
| 125 | 762 | 558 | 5:34.0 | -68:47 | 2X | 3 | 218* 218 | | 2 | 3L | 1 | .30 | 3 | | | | 150 | 2.7 | 0.93* | | | | |
| 129 | 762 | 558 | 5:34.0 | -68:47 | 2X | 3 | 75* 76 | | 12 | 10C | 1 | .30 | 4 | | | | 150 | 2.7 | 0.71* | | | | |
| 130 | 770 | 555 | 5:34.0 | -68:47 | 2X | 3 | 153* 157 | | 12 | 30C | 0 | .30 | 1 | | | | 150 | 2.7 | 2.1* | | | | |
| 124 | 704 | 556 | 5:34.1 | -69:57 | 5X | 5 | 83* 80 | | 30 | 1L | 30 | .30 | 132 | LH80 | 4.0 3.0 | -- | | | | 2028 | | | |
| 125 | 706 | 557 | 5:34.1 | -69:57 | 5X | 5 | 213 208 | | 23 | 3L | 8 | .30 | 34 | LH80 | 4.0 3.0 | -- | | | | 2028 | | | |
| 129 | 707 | 557 | 5:34.1 | -69:57 | 5X | 5 | 61* 53 | | 55 | 10C | 6 | .30 | 17 | LH80 | 4.0 3.0 | -- | | | | 2028 | | | |

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| FR. | X | Y | P.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LM NO. | SIZE | BS | N NO. | HA | HI | NOC NO. | SAD NO. | M | SP |
|-----|-----|-----|--------|--------|-------|---------|---------|-------|-----|-------|-----|-------|-----------|--------|------|----|---------------|--------|---------|---------|---------|---|-------|
| 120 | 707 | 555 | 5:34.1 | -69:57 | 5X | 5 | 201*212 | 332 | 30C | 11 | .30 | 35 | LM80 | 4.0 | 3.0 | -- | | | | 2028 | | | |
| 124 | 866 | 558 | 5:34.5 | -66:16 | 5X | 4 | 91 88 | 15 | 1L | 15 | .08 | 23 | | | | | 62AB | 41.9 | 1.85 | | | | |
| 125 | 867 | 558 | 5:34.5 | -66:16 | 5X | 4 | 239 227 | 103 | 3L | 34 | .08 | 52 | | | | | 62AB | 41.9 | 0.81 | | | | |
| 129 | 887 | 559 | 5:34.5 | -66:16 | 5X | 4 | 101* 90 | 110 | 10C | 11 | .08 | 15 | | | | | 62AB | 41.9 | 2.80 | | | | |
| 120 | 888 | 558 | 5:34.5 | -66:16 | 5X | 4 | 331 255 | 424 | 30C | 14 | .08 | 19 | | | | | 62AB | 41.9 | 2.19 | | | | |
| 124 | 944 | 559 | 5:35.0 | -65:06 | 2X | 2 | 81 75 | 20 | 1L | 20 | .05 | 26 | | | | | | | | | | | -- |
| 125 | 946 | 560 | 5:35.0 | -65:06 | 2X | 2 | 205 193 | 41 | 3L | 14 | .05 | 18 | | | | | | | | | | | -- |
| 129 | 946 | 559 | 5:35.0 | -65:06 | 2X | 2 | 49 38 | 40 | 10C | 4 | .05 | 5 | | | | | | | | | | | -- |
| 120 | 946 | 557 | 5:35.0 | -65:06 | 2X | 2 | 117 92 | 85 | 30C | 3 | .05 | 3 | | | | | | | | | | | -- |
| 124 | 715 | 552 | 5:35.2 | -69:45 | 7X | 6 | 112* 94 | 279 | 1L | 279 | .30 | 1228 | LM81 | 5.5 | 4.5 | 49 | (154) | | | | | | 2033 |
| 125 | 715 | 553 | 5:35.2 | -69:45 | 7X | 6 | 298*257 | 623 | 3L | 208 | .30 | 915 | LM81 | 5.5 | 4.5 | 49 | (154) | | | | | | 2033 |
| 129 | 715 | 552 | 5:35.2 | -69:45 | 7X | 6 | 223*126 | 1399 | 10C | 140 | .30 | 444 | LM81 | 5.5 | 4.5 | 49 | (154) | | | | | | 2033 |
| 130 | 716 | 549 | 5:35.2 | -69:45 | 7X | 6 | 821 503 | 4483 | 30C | 149* | .30 | 474 | LM81 | 5.5 | 4.5 | 49 | (154) | | | | | | 2033 |
| 124 | 780 | 550 | 5:35.4 | -68:28 | 3X | 3 | 84 79 | 33 | 1L | 33 | .25 | 114 | (LM85) | | | | | | | | | | 2042? |
| 125 | 778 | 550 | 5:35.4 | -68:28 | 6X | 5 | 221 206 | 201 | 3L | 67 | .25 | 232 | (LM85) | | | | | | | | | | 2042? |
| 129 | 779 | 551 | 5:35.4 | -68:28 | 3X | 4 | 64 46 | 126 | 10C | 13 | .25 | 33 | (LM85) | | | | | | | | | | 2042? |
| 130 | 780 | 549 | 5:35.4 | -68:28 | 5X | 6 | 156 113 | 650 | 30C | 22 | .25 | 56 | (LM85) | | | | | | | | | | 2042? |
| 124 | 717 | 550 | 5:35.5 | -69:44 | 14X17 | 112 | 84 | 1378 | 1L | 1378 | .30 | 6050 | (LM81.87) | | | | 154, AB | 1288.4 | 0.21 | 2033.48 | | | |
| 125 | 719 | 551 | 5:35.5 | -69:44 | 14X17 | 344 | 219 | 7386 | 3L | 2462 | .30 | 10840 | (LM81.87) | | | | 154, AB | 1288.4 | 0.12 | 2033.48 | | | |
| 129 | 716 | 550 | 5:35.5 | -69:44 | 14X17 | 173 | 66 | 8894 | 10C | 889 | .30 | 2820 | (LM81.87) | | | | 154, AB | 1288.4 | 0.46 | 2033.48 | | | |
| 130 | 718 | 549 | 5:35.5 | -69:44 | 14X17 | 821 | 179 | 30467 | 30C | 1016* | .30 | 3220 | (LM81.87) | | | | 154, AB | 1288.4 | 0.40 | 2033.48 | | | |
| 124 | 821 | 551 | 5:35.6 | -67:35 | 8X10 | 95 | 87 | 152 | 1L | 152 | .11 | 269 | (LM82.88) | | | | 56.59A-C543.2 | 2.02 | 2029.40 | | | | |
| 125 | 822 | 552 | 5:35.6 | -67:35 | 8X10 | 262 | 236 | 375 | 3L | 125 | .11 | 221 | (LM82.88) | | | | 56.59A-C543.2 | 2.46 | 2029.40 | | | | |
| 129 | 821 | 551 | 5:35.6 | -67:35 | 8X10 | 137* 88 | | 796 | 10C | 80 | .11 | 122 | (LM82.88) | | | | 56.59A-C543.2 | 4.45 | 2029.40 | | | | |
| 130 | 822 | 550 | 5:35.6 | -67:35 | 8X10 | 473*253 | | 2168 | 30C | 72 | .11 | 111 | (LM82.88) | | | | 56.59A-C543.2 | 4.91 | 2029.40 | | | | |

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| FR | X | Y | P.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LW NO. | SIZE | BS | N NO. | HA | HI | NOC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|-----|----|---------|-------|-----|------|------|------|---------|--------|------|----|---------|-------|------|---------|---------|-------------|----|
| 124 | 422 | 550 | 5:35.6 | -67:34 | 7X | 5 | 94* 89 | 57 | 1L | 57 | .11 | 101 | LM82 | 6.0 | 3.3 | -- | (56.59) | | | | | 2029-35 | |
| 124 | 421 | 551 | 5:35.6 | -67:34 | 7X | 5 | 250+239 | 89 | 3L | 30 | .11 | 53 | LM82 | 6.0 | 3.0 | -- | (56.59) | | | | | 2029-35 | |
| 124 | 422 | 551 | 5:35.6 | -67:34 | 7X | 5 | 137+102 | 265 | 10C | 27 | .11 | 41 | LM82 | 6.0 | 3.0 | -- | (56.59) | | | | | 2029-35 | |
| 120 | 421 | 549 | 5:35.6 | -67:34 | 7X | 5 | 454+305 | 1232 | 30C | 41 | .11 | 63 | LM82 | 6.0 | 3.0 | -- | (56.59) | | | | | 2029-35 | |
| 124 | 421 | 553 | 5:35.6 | -66:02 | 5X | 5 | 94* 87 | 56 | 1L | 56 | .09* | 89 | LM83 | 4.0 | 4.0 | 10 | (63) | | | | | 2030 | |
| 124 | 423 | 553 | 5:35.6 | -66:02 | 5X | 5 | 250 237 | 77 | 3L | 26 | .09* | 41 | LM83 | 4.0 | 4.0 | 10 | (63) | | | | | 2030 | |
| 124 | 423 | 553 | 5:35.6 | -66:02 | 5X | 5 | 133 95 | 291 | 10C | 29 | .09* | 41 | LM83 | 4.0 | 4.0 | 10 | (63) | | | | | 2030 | |
| 120 | 420 | 551 | 5:35.6 | -66:02 | 5X | 5 | 422+270 | 1143 | 30C | 38 | .09* | 54 | LM83 | 4.0 | 4.0 | 10 | (63) | | | | | 2030 | |
| 124 | 421 | 553 | 5:35.6 | -66:01 | 7X | 6 | 94* 85 | 103 | 1L | 103 | .09 | 164 | (LM83) | | | | 63.A | 101.8 | 0.62 | | | 2030 | |
| 124 | 423 | 553 | 5:35.6 | -66:01 | 7X | 6 | 250 229 | 316 | 3L | 105 | .09 | 167 | (LM83) | | | | 63.A | 101.8 | 0.61 | | | 2030 | |
| 124 | 423 | 553 | 5:35.6 | -66:01 | 7X | 6 | 133 82 | 614 | 10C | 61 | .09 | 87 | (LM83) | | | | 63.A | 101.8 | 1.18 | | | 2030 | |
| 120 | 423 | 551 | 5:35.6 | -66:01 | 7X | 6 | 422+225 | 1661 | 30C | 55 | .09 | 78 | (LM83) | | | | 63.A | 101.8 | 1.31 | | | 2030 | |
| 124 | 423 | 549 | 5:35.7 | -66:56 | 6X | 9 | 108+104 | 58 | 1L | 58 | .15* | 125 | LM84 | 5.0 | 9.0 | 38 | | | | | | 2027(LH77) | |
| 124 | 423 | 550 | 5:35.7 | -66:56 | 6X | 9 | 304+297 | -54 | 3L | -18 | .15* | -- | LM84 | 5.0 | 9.0 | 38 | | | | | | 2027(LH77) | |
| 124 | 424 | 550 | 5:35.7 | -66:56 | 6X | 9 | 226+198 | 281 | 10C | -28 | .15* | -- | LM84 | 5.0 | 9.0 | 38 | | | | | | 2027(LH77) | |
| 130 | 423 | 547 | 5:35.7 | -66:56 | 6X | 9 | 549+552 | 283 | 30C | 9* | .15* | 17 | LM84 | 5.0 | 9.0 | 38 | | | | | | 2027(LH77) | |
| 124 | 486 | 549 | 5:35.7 | -66:14 | 2X | 2 | 82 81 | 3 | 1L | 3 | .07 | 4 | -- | | | | (62) | | | | | 2030? | |
| 124 | 490 | 553 | 5:35.7 | -66:14 | 2X | 2 | 218 210 | 28 | 3L | 9 | .07 | 13 | -- | | | | (62) | | | | | 2030? | |
| 124 | 489 | 550 | 5:35.7 | -66:14 | 2X | 2 | 61 55 | 22 | 10C | 2 | .07 | 3 | -- | | | | (62) | | | | | 2030? | |
| 130 | 489 | 549 | 5:35.7 | -66:14 | 2X | 2 | 149 130 | 73 | 30C | 2 | .07 | 3 | -- | | | | (62) | | | | | 2030? | |
| 124 | 717 | 549 | 5:35.8 | -69:42 | 88* | | 111* 86 | 998 | 1L | 998 | .30 | 4390 | LM81.87 | 59.8* | | 99 | (154) | | | | | 2033.48 | |
| 125 | 718 | 550 | 5:35.8 | -69:42 | 86* | | 314+234 | 3100 | 3L | 1033 | .30 | 4550 | LM81.87 | 59.8* | | 99 | (154) | | | | | 2033.48 | |
| 129 | 718 | 549 | 5:35.8 | -69:42 | 88* | | 243* 82 | 6718 | 10C | 602 | .30 | 1910 | LM81.87 | 59.8* | | 99 | (154) | | | | | 2033.48 | |
| 130 | 719 | 547 | 5:35.8 | -69:42 | 78* | | 772+289 | 16461 | 30C | 549* | .30 | 1740 | LM81.87 | 59.8* | | 99 | (154) | | | | | 2033.48 | |
| 124 | 727 | 548 | 5:35.9 | -68:52 | 5X | 5 | 90* 90 | 18 | 1L | 18 | .42 | 132 | LM85 | 4.0 | 3.0 | 24 | | | | | | (LM89)2042? | |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BQ | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAD NO. | M | SP |
|-----|-----|-----|--------|--------|-----|----|------|-----|------|-----|-----|------|------|----------|-------|-----|-------|---------|----|-------------|--------------|---|----|
| 125 | 758 | 548 | 5:35.9 | -68:52 | 5X | 5 | 260 | 250 | 118 | 3L | 29 | .42 | 213 | LM85 | 4.0 | 3.0 | 24 | | | (LM89)2042? | | | |
| 129 | 760 | 549 | 5:35.9 | -68:52 | 5X | 5 | 104 | 85 | 159 | 10C | 16 | .42 | 80 | LM85 | 4.0 | 3.0 | 24 | | | (LM89)2042? | | | |
| 130 | 759 | 547 | 5:35.9 | -68:52 | 5X | 5 | 318 | 266 | 583 | 30C | 19 | .42 | 97 | LM85 | 4.0 | 3.0 | 24 | | | (LM89)2042? | | | |
| 124 | 822 | 548 | 5:36.0 | -67:34 | 51* | | 88* | 88 | 60 | 1L | 60 | .11 | 106 | LM82.88 | 22.0* | | 9 | (56.59) | | | 2029-40 | | |
| 125 | 821 | 549 | 5:36.0 | -67:34 | 51* | | 233 | 232 | 225 | 3L | 75 | .11 | 132 | LM82.88 | 22.0* | | 9 | (56.59) | | | 2029-40 | | |
| 129 | 822 | 550 | 5:36.0 | -67:34 | 47* | | 124* | 91 | 569 | 10C | 57 | .11 | 87 | LM82.88 | 22.0* | | 9 | (56.59) | | | 2029-40 | | |
| 130 | 823 | 548 | 5:36.0 | -67:34 | 47* | | 375 | 280 | 1829 | 30C | 61 | .11 | 94 | LM82.88 | 22.0* | | 9 | (56.59) | | | 2029-40 | | |
| 124 | 826 | 548 | 5:36.0 | -67:28 | 6X | 5 | 93 | 88 | 23 | 1L | 23 | .11* | 41 | LM86 | 5.0 | 3.0 | 13 | (56.59) | | | (LM82.88.92) | | |
| 125 | 828 | 549 | 5:36.0 | -67:28 | 6X | 5 | 245 | 238 | 47 | 3L | 16 | .11* | 28 | LM86 | 5.0 | 3.0 | 13 | (56.59) | | | (LM82.88.92) | | |
| 129 | 827 | 548 | 5:36.0 | -67:28 | 6X | 5 | 108 | 92 | 95 | 10C | 10 | .11* | 15 | LM86 | 5.0 | 3.0 | 13 | (56.59) | | | (LM82.88.92) | | |
| 130 | 828 | 546 | 5:36.0 | -67:28 | 6X | 5 | 320 | 245 | 521 | 30C | 17 | .11* | 27 | LM86 | 5.0 | 3.0 | 13 | (56.59) | | | (LM82.88.92) | | |
| 124 | 755 | 546 | 5:36.2 | -68:55 | 62* | | 98 | 87 | 187 | 1L | 187 | .42 | 1375 | LM85.89 | 48.0* | | 108 | | | | 2042 | | |
| 125 | 756 | 546 | 5:36.2 | -68:55 | 64* | | 264 | 233 | 589 | 3L | 196 | .42 | 1440 | LM85.89 | 48.0* | | 108 | | | | 2042 | | |
| 129 | 758 | 548 | 5:36.2 | -68:55 | 61* | | 130* | 81 | 1501 | 10C | 150 | .42 | 751 | LM85.89 | 48.0* | | 108 | | | | 2042 | | |
| 130 | 757 | 546 | 5:36.2 | -68:55 | 64* | | 470 | 235 | 5275 | 30C | 176 | .42 | 880 | LM85.89 | 48.0* | | 108 | | | | 2042 | | |
| 124 | 824 | 548 | 5:36.2 | -67:31 | 83* | | 83* | 87 | 138 | 1L | 138 | .11 | 244 | LM82--92 | 43.2* | | 25 | (56.59) | | | 2029-40 | | |
| 125 | 825 | 548 | 5:36.2 | -67:31 | 83* | | 238 | 232 | 244 | 3L | 81 | .11 | 144 | LM82--92 | 43.2* | | 25 | (56.59) | | | 2029-40 | | |
| 129 | 824 | 550 | 5:36.2 | -67:31 | 78* | | 103* | 87 | 895 | 10C | 90 | .11 | 137 | LM82--92 | 43.2* | | 25 | (56.59) | | | 2029-40 | | |
| 130 | 825 | 547 | 5:36.2 | -67:31 | 77* | | 255 | 230 | 4025 | 30C | 134 | .11 | 205 | LM82--92 | 43.2* | | 25 | (56.59) | | | 2029-40 | | |
| 124 | 822 | 546 | 5:36.3 | -67:34 | 4X | 4 | 85* | 86 | 0 | 1L | 0 | .11 | -- | LM88 | 2.0 | 2.0 | 9 | (56.59) | | | 2040 | | |
| 125 | 821 | 547 | 5:36.3 | -67:34 | 4X | 4 | 229 | 225 | 3 | 3L | 1 | .11 | 2 | LM88 | 2.0 | 2.0 | 9 | (56.59) | | | 2040 | | |
| 129 | 822 | 548 | 5:36.3 | -67:34 | 4X | 4 | 101* | 92 | -28 | 10C | -3 | .11 | -- | LM88 | 2.0 | 2.0 | 9 | (56.59) | | | 2040 | | |
| 130 | 823 | 547 | 5:36.3 | -67:34 | 4X | 4 | 320 | 290 | 4 | 30C | 0 | .11 | 0 | LM88 | 2.0 | 2.0 | 9 | (56.59) | | | 2040 | | |
| 124 | 963 | 550 | 5:36.3 | -64:45 | 5X | 4 | 81 | 77 | 49 | 1L | 49 | .05 | 64 | | | | | | | -- | | | |
| 125 | 963 | 552 | 5:36.3 | -64:45 | 6X | 5 | 210 | 197 | 197 | 3L | 66 | .05 | 86 | | | | | | | -- | | | |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|-------|-----|-----|----|-----------|------|-----|------|------|--------|------|----|---------|----|----|-------------|---------|----|----|
| 129 | 964 | 552 | 5:36.3 | -64:45 | 2X 2 | 48 | 40 | | 29 10C | 3 | .05 | | 4 | | | | | | | -- | | | |
| 130 | 964 | 550 | 5:36.3 | -64:45 | 2X 2 | 114 | 94 | | 36 30C | 1 | .05 | | 1 | | | | | | | -- | | | |
| 124 | 719 | 546 | 5:36.4 | -69:39 | 6X 8 | 99 | 92 | | 149 1L | 149 | .30 | 655 | L487 | 5.0 | 7.0 | 50 | (154) | | | 2048 | | | |
| 125 | 720 | 547 | 5:36.4 | -69:39 | 6X 8 | 273 | 260 | | 550 3L | 183 | .30 | 805 | L487 | 5.0 | 7.0 | 50 | (154) | | | 2048 | | | |
| 129 | 720 | 546 | 5:36.4 | -69:39 | 6X 8 | 151 | 123 | | 1131 10C | 113 | .30 | 359 | L487 | 5.0 | 7.0 | 50 | (154) | | | 2048 | | | |
| 130 | 721 | 544 | 5:36.4 | -69:39 | 6X 8 | 493 | 366 | | 4156 30C | 139 | .30 | 439 | L487 | 5.0 | 7.0 | 50 | (154) | | | 2048 | | | |
| 124 | 742 | 545 | 5:36.5 | -69:11 | 5X 5 | 100 | 94 | | 38 1L | 38 | .31 | 175 | L490 | 4.0 | 3.5 | 21 | (157) | | | 2044 | | | |
| 125 | 742 | 546 | 5:36.5 | -69:11 | 5X 5 | 275 | 266 | | 118 3L | 39 | .31 | 179 | L490 | 4.0 | 3.5 | 21 | (157) | | | 2044 | | | |
| 129 | 743 | 546 | 5:36.5 | -69:11 | 5X 5 | 180 | 137 | | 264 10C | 26 | .31 | 87 | L490 | 4.0 | 3.5 | 21 | (157) | | | 2044 | | | |
| 130 | 743 | 544 | 5:36.5 | -69:11 | 5X 5 | 623 | 458 | | 995 30C | 33 | .31 | 109 | L490 | 4.0 | 3.5 | 21 | (157) | | | 2044 | | | |
| 124 | 754 | 545 | 5:36.5 | -68:57 | 9X 5 | 94 | 88 | | 76 1L | 76 | .42 | 458 | L489 | 9.0 | 4.0 | 84 | | | | 2042(L485) | | | |
| 125 | 755 | 546 | 5:36.5 | -68:57 | 9X 5 | 253 | 239 | | 256 3L | 85 | .42 | 625 | L489 | 9.0 | 4.0 | 84 | | | | 2042(L485) | | | |
| 129 | 756 | 547 | 5:36.5 | -68:57 | 9X 5 | 163 | 96 | | 863 10C | 86 | .42 | 432 | L489 | 9.0 | 4.0 | 84 | | | | 2042(L485) | | | |
| 130 | 755 | 545 | 5:36.5 | -68:57 | 9X 5 | 488 | 283 | | 2838 30C | 95 | .42 | 474 | L489 | 9.0 | 4.0 | 84 | | | | 2042(L485) | | | |
| 124 | 875 | 545 | 5:36.6 | -66:27 | 4X 4 | 100 | 98 | | -24 1L | -24 | .06 | -- | L491 | 2.0 | 2.0 | 4 | | | | (SA0249322) | | | |
| 125 | 876 | 547 | 5:36.6 | -66:27 | 4X 4 | 283 | 283 | | -71 3L | -24 | .06 | -- | L491 | 2.0 | 2.0 | 4 | | | | (SA0249322) | | | |
| 129 | 876 | 547 | 5:36.6 | -66:27 | 4X 4 | 133 | 137 | | -145 10C | -15 | .06 | -- | L491 | 2.0 | 2.0 | 4 | | | | (SA0249322) | | | |
| 130 | 878 | 545 | 5:36.6 | -66:27 | 4X 4 | 333 | 358 | | 8 30C | 0 | .06 | 0 | L491 | 2.0 | 2.0 | 4 | | | | (SA0249322) | | | |
| 124 | 827 | 544 | 5:36.7 | -67:27 | 4X 4 | 90 | 87 | | 3 1L | 3 | .11 | 5 | L492 | 2.5 | 2.5 | 3 | (56.59) | | | (L486) | | | |
| 125 | 829 | 546 | 5:36.7 | -67:27 | 4X 4 | 231 | 230 | | 37 3L | 12 | .11 | 21 | L492 | 2.5 | 2.5 | 3 | (56.59) | | | (L486) | | | |
| 129 | 827 | 545 | 5:36.7 | -67:27 | 4X 4 | 89 | 81 | | 92 10C | 9 | .11 | 14 | L492 | 2.5 | 2.5 | 3 | (56.59) | | | (L486) | | | |
| 130 | 828 | 543 | 5:36.7 | -67:27 | 4X 4 | 246 | 220 | | 279 30C | 9 | .11 | 14 | L492 | 2.5 | 2.5 | 3 | (56.59) | | | (L486) | | | |
| 124 | 871 | 545 | 5:36.9 | -66:35 | 11X 8 | 129 | 83 | | 1525 1L | 1525 | .05 | 1980 | | | | | | | | 249322 | 6.4 | A0 | |
| 125 | 872 | 546 | 5:36.9 | -66:35 | 13X10 | 425 | 223 | | 7500 3L | 2500 | .05 | 3250 | | | | | | | | 249322 | 6.4 | A0 | |
| 129 | 872 | 546 | 5:36.9 | -66:35 | 14X10 | 595 | 71 | | 19000 10C | 1900 | .05 | 2300 | | | | | | | | 249322 | 6.4 | A0 | |

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| FR. | X | Y | R.A. | DEC. | X*Y | P | BG | V | E.F | V/E | RE | UF | LM NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|-------|------|------|-------|-----|------|------|------|--------|------|-----|-------|-------|------|---------|---------|-----|----|
| 130 | 872 | 544 | 5:36.9 | -66:35 | 17x13 | 883 | 188 | 38900 | 30C | 1297 | .05 | 1570 | | | | | | | | 249322 | 6.4 | A0 |
| 124 | 880 | 544 | 5:36.9 | -66:22 | 4X 4 | 91* | 89 | 13 | 1L | 13 | .06 | 18 | LH95 | 1.5 | 1.5 | 2 | (64) | | | | | |
| 125 | 881 | 547 | 5:36.9 | -66:22 | 4X 4 | 241 | 237 | 5 | 3L | 2 | .06 | 1 | LH95 | 1.5 | 1.5 | 2 | (64) | | | | | |
| 129 | 883 | 545 | 5:36.9 | -66:22 | 4X 4 | 95 | 84 | 82 | 10C | 8 | .06 | 10 | LH95 | 1.5 | 1.5 | 2 | (64) | | | | | |
| 130 | 883 | 543 | 5:36.9 | -66:22 | 4X 4 | 277 | 231 | 316 | 30C | 11 | .06 | 13 | LH95 | 1.5 | 1.5 | 2 | (64) | | | | | |
| 124 | 911 | 545 | 5:37.0 | -65:47 | 2X 2 | 82 | 77 | 17 | 1L | 17 | .06 | 23 | | | | | | | | | | |
| 125 | 911 | 549 | 5:37.0 | -65:47 | 2X 2 | 207 | 199 | 32 | 3L | 11 | .06 | 15 | | | | | | | | | | |
| 129 | 912 | 547 | 5:37.0 | -65:47 | 2X 2 | 43 | 39 | 14 | 10C | 1 | .06 | 2 | | | | | | | | | | |
| 130 | 912 | 545 | 5:37.0 | -65:47 | 2X 2 | 107 | 93 | 52 | 30C | 2 | .06 | 2 | | | | | | | | | | |
| 124 | 727 | 544 | 5:37.1 | -69:30 | 4X 4 | 130* | 120 | 124 | 1L | 124 | .23 | 393 | LH94 | 2.5 | 1.5 | 8 | (158) | | | | | |
| 125 | 728 | 544 | 5:37.1 | -69:30 | 4X 4 | 402* | 360 | 526 | 3L | 175 | .23 | 555 | LH94 | 2.5 | 1.5 | 8 | (158) | | | | | |
| 129 | 726 | 544 | 5:37.1 | -69:30 | 4X 4 | 180* | 221 | 231 | 10C | 23 | .23 | 56 | LH94 | 2.5 | 1.5 | 8 | (158) | | | | | |
| 130 | 728 | 542 | 5:37.1 | -69:30 | 4X 4 | 922* | 815 | 940 | 30C | 31* | .23 | 76 | LH94 | 2.5 | 1.5 | 8 | (158) | | | | | |
| 124 | 732 | 544 | 5:37.1 | -69:24 | 4X 5 | 127* | 120 | 47 | 1L | 47 | .23* | 149 | LH93 | 2.0 | 4.0 | 35 | (158) | | | | | |
| 125 | 733 | 544 | 5:37.1 | -69:24 | 4X 5 | 394* | 382 | 120 | 3L | 40 | .23* | 127 | LH93 | 2.0 | 4.0 | 35 | (158) | | | | | |
| 129 | 731 | 544 | 5:37.1 | -69:24 | 4X 5 | 409* | 346 | 284 | 10C | 28 | .23* | 69 | LH93 | 2.0 | 4.0 | 35 | (158) | | | | | |
| 130 | 733 | 542 | 5:37.1 | -69:24 | 4X 5 | 969* | 864 | 801 | 30C | 27* | .23* | 65 | LH93 | 2.0 | 4.0 | 35 | (158) | | | | | |
| 124 | 881 | 543 | 5:37.1 | -66:21 | 6X 7 | 91* | 86 | 85 | 1L | 85 | .06 | 116 | (LH95) | | | | 64A-C | 91.3 | 0.79 | | | |
| 125 | 882 | 546 | 5:37.1 | -66:21 | 6X 7 | 239 | 234* | 134 | 3L | 45 | .06 | 61 | (LH95) | | | | 64A-C | 91.3 | 1.50 | | | |
| 129 | 883 | 545 | 5:37.1 | -66:21 | 6X 7 | 95 | 75 | 240 | 10C | 24 | .06 | 30 | (LH95) | | | | 64A-C | 91.3 | 3.02 | | | |
| 130 | 883 | 543 | 5:37.1 | -66:21 | 6X 7 | 277 | 197 | 929 | 30C | 31 | .06 | 39 | (LH95) | | | | 64A-C | 91.3 | 2.34 | | | |
| 124 | 788 | 542 | 5:37.2 | -68:15 | 2X 2 | 87 | 86 | 3 | 1L | 3 | .15 | 6 | | | | | 68 | 0.6 | 0.09* | | | |
| 125 | 789 | 543 | 5:37.2 | -68:15 | 2X 2 | 212 | 212 | 8 | 3L | 3 | .15 | 6 | | | | | 68 | 0.6 | 0.10* | | | |
| 129 | 787 | 544 | 5:37.2 | -68:15 | 2X 2 | 52* | 52 | 3 | 10C | 0 | .15 | 1 | | | | | 68 | 0.6 | 1.1* | | | |
| 130 | 787 | 542 | 5:37.2 | -68:15 | 2X 2 | 123* | 125 | 15 | 30C | 1 | .15 | 1 | | | | | 68 | 0.6 | 0.67 | | | |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NOC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|-----------|------|-------|-------|-------|------|------|------------|-------------|--------|------|-------|-----------|------|------|----------|---------|---|----|
| 130 | 731 | 542 | 5:37.3 | -69:27 | 13X131006 | 391 | 30000 | 300 | 1000* | .23 | 2420 | (LM93--98) | | | | | (152.158) | | | 2050.55 | | | |
| 124 | 867 | 542 | 5:37.3 | -66:38 | 6X13 | 95* | 89 | 37 | 11 | 37 | .10 | 62 | (SA0249322) | | | | 65(3/4) | 43.2 | 0.70 | | | | |
| 125 | 868 | 542 | 5:37.3 | -66:38 | 6X13 | 250* | 232 | 168 | 3L | 56 | .10 | 94 | (SA0249322) | | | | 65(3/4) | 43.2 | 0.46 | | | | |
| 129 | 868 | 543 | 5:37.3 | -66:38 | 6X13 | 126* | 90 | 115 | 10C | 12 | .10 | 17 | (SA0249322) | | | | 65(3/4) | 43.2 | 2.34 | | | | |
| 130 | 868 | 541 | 5:37.3 | -66:38 | 6X13 | 368* | 234 | 719 | 30C | 24 | .10 | 35 | (SA0249322) | | | | 65(3/4) | 43.2 | 1.23 | | | | |
| 124 | 732 | 542 | 5:37.4 | -69:25 | 10X16 | 123* | 99 | 1175 | 1L | 1175 | .23 | 3723 | LM96 | 10.0 | 17.0 | 226 | (158) | | | 2050.55 | | | |
| 125 | 732 | 542 | 5:37.4 | -69:25 | 10X16 | 364* | 272 | 6172 | 3L | 2057 | .23 | 6510 | LM96 | 10.0 | 17.0 | 226 | (158) | | | 2050.55 | | | |
| 129 | 730 | 543 | 5:37.4 | -69:25 | 10X16 | 399* | 173 | 6511 | 10C | 651 | .23 | 1580 | LM96 | 10.0 | 17.0 | 226 | (158) | | | 2050.55 | | | |
| 130 | 732 | 541 | 5:37.4 | -69:25 | 10X16 | 1006 | 508 | 24990 | 30C | 833* | .23 | 2015 | LM96 | 10.0 | 17.0 | 226 | (158) | | | 2050.55 | | | |
| 124 | 732 | 542 | 5:37.5 | -69:26 | 168* | 123* | 95 | 1877 | 1L | 1877 | .23 | 5950 | LM93--98 | 192.8* | 305 | (158) | | | | 2050.55 | | | |
| 125 | 732 | 542 | 5:37.5 | -69:26 | 164* | 364* | 272 | 6389 | 3L | 2130 | .23 | 6750 | LM93--98 | 192.8* | 305 | (158) | | | | 2050.55 | | | |
| 129 | 732 | 541 | 5:37.5 | -69:26 | 168* | 399* | 173 | 6520 | 10C | 652 | .23 | 1580 | LM93--98 | 192.8* | 305 | (158) | | | | 2050.55 | | | |
| 130 | 732 | 541 | 5:37.5 | -69:26 | 168* | 1006 | 508 | 25213 | 30C | 870* | .23 | 2010 | LM93--98 | 192.8* | 305 | (158) | | | | 2050.55 | | | |
| 124 | 695 | 545 | 5:37.6 | -70:10 | 2X | 2 | 83 | 80 | 11 | 11 | .31 | 51 | -- | | | | | | | 2066.72? | | | |
| 125 | 698 | 543 | 5:37.6 | -70:10 | 3X | 3 | 216 | 203 | 55 | 3L | 18 | .31 | 84 | -- | | | | | | 2066.72? | | | |
| 129 | 696 | 543 | 5:37.6 | -70:10 | 2X | 2 | 52 | 39 | 91 | 10C | 9 | .31 | 30 | -- | | | | | | 2066.72? | | | |
| 130 | 697 | 541 | 5:37.6 | -70:10 | 3X | 3 | 130 | 98 | 170 | 30C | 6 | .31 | 19 | -- | | | | | | 2062.72? | | | |
| 124 | 814 | 536 | 5:37.6 | -67:44 | 2X | 2 | 86 | 81 | 18 | 1L | 18 | .12 | 33 | -- | | | | | | -- | | | |
| 125 | 815 | 541 | 5:37.6 | -67:44 | 2X | 2 | 229 | 217 | 46 | 3L | 15 | .12 | 28 | -- | | | | | | -- | | | |
| 129 | 814 | 540 | 5:37.6 | -67:44 | 4X | 6 | 67 | 47 | 238 | 10C | 24 | .12 | 38 | -- | | | | | | -- | | | |
| 130 | 815 | 538 | 5:37.6 | -67:44 | 7X | 7 | 176 | 118 | 1260 | 30C | 42 | .12 | 67 | -- | | | | | | -- | | | |
| 124 | 713 | 539 | 5:37.7 | -69:47 | 3X | 3 | 83* | 83 | 2 | 1L | 2 | .30 | 9 | | | | 155 | 2.2 | 0.2* | | | | |
| 125 | 712 | 540 | 5:37.7 | -69:47 | 3X | 3 | 216* | 214 | 12 | 3L | 4 | .30 | 18 | | | | 155 | 2.2 | 0.12 | | | | |
| 129 | 714 | 541 | 5:37.7 | -69:47 | 3X | 3 | 56* | 55 | 7 | 10C | 1 | .30 | 2 | | | | 155 | 2.2 | 1.0* | | | | |
| 130 | 714 | 538 | 5:37.7 | -69:47 | 3X | 3 | 127* | 127 | 5 | 30C | 0 | .30 | 1 | | | | 155 | 2.2 | 4.1* | | | | |

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| FR. | X | Y | P.A. | DEC. | *X | *Y | P | BQ | V | E.F | V/E | RE | UF | L.H NO. | SIZE | BS | N NO. | HA | H1 | NOC NO. | SAO NO. | M | S |
|-----|-----|-----|--------|--------|-------|----|---------|------|-----|--------|-----|------|------------|---------|------|-------|-------|------|----|---------|---------|---|---|
| 124 | 729 | 540 | 5:38.0 | -69:28 | 4X | 4 | 109*107 | -8 | 1L | -8 | .23 | -- | LH98 | 2.0 | 1.5 | 7 | (158) | | | | | | |
| 125 | 730 | 539 | 5:38.0 | -69:28 | 4X | 4 | 286*293 | 71 | 3L | 24 | .23 | 76 | LH98 | 2.0 | 1.5 | 7 | (158) | | | | | | |
| 129 | 728 | 540 | 5:38.0 | -69:28 | 4X | 4 | 166*209 | 91 | 10C | 9 | .23 | 22 | LH98 | 2.0 | 1.5 | 7 | (158) | | | | | | |
| 130 | 730 | 538 | 5:38.0 | -69:28 | 4X | 4 | 812*779 | 984 | 30C | 33*.23 | | 78 | LH98 | 2.0 | 1.5 | 7 | (158) | | | | | | |
| 124 | 735 | 540 | 5:38.0 | -69:21 | 5X | 4 | 105*101 | 26 | 1L | 26 | .23 | 83 | LH97 | 4.0 | 2.0 | 29 | (158) | | | | | | |
| 125 | 735 | 539 | 5:38.0 | -69:21 | 5X | 4 | 296*288 | 189 | 3L | 63 | .23 | 200 | LH97 | 4.0 | 2.0 | 29 | (158) | | | | | | |
| 129 | 734 | 540 | 5:38.0 | -69:21 | 5X | 4 | 253*234 | 214 | 10C | 21 | .23 | 52 | LH97 | 4.0 | 2.0 | 29 | (158) | | | | | | |
| 130 | 736 | 538 | 5:38.0 | -69:21 | 5X | 4 | 794*679 | 1079 | 30C | 36*.23 | | 87 | LH97 | 4.0 | 2.0 | 29 | (158) | | | | | | |
| 124 | 722 | 538 | 5:38.1 | -69:36 | 3X | 2 | 85* 85 | -1 | 1L | -1 | .28 | -- | -- | | | 156 | 1.4 | -- | | | | | |
| 125 | 723 | 540 | 5:38.1 | -69:36 | 3X | 2 | 241*239 | -5 | 3L | -2 | .28 | -- | -- | | | 156 | 1.4 | -- | | | | | |
| 129 | 723 | 540 | 5:38.1 | -69:36 | 3X | 2 | 88* 90 | -1 | 10C | 0 | .28 | -- | -- | | | 156 | 1.4 | -- | | | | | |
| 130 | 723 | 537 | 5:38.1 | -69:36 | 3X | 2 | 229*241 | -4 | 30C | 0 | .28 | -- | -- | | | 156 | 1.4 | -- | | | | | |
| 124 | 743 | 539 | 5:38.2 | -69:11 | 5X | 5 | 93* 92 | 43 | 1L | 43 | .32 | 208 | LH99 | 3.0 | 3.0 | -- | (157) | | | 2060 | | | |
| 125 | 743 | 539 | 5:38.2 | -69:11 | 5X | 5 | 243*246 | 60 | 3L | 20 | .32 | 97 | LH99 | 3.0 | 3.0 | -- | (157) | | | 2060 | | | |
| 129 | 743 | 539 | 5:38.2 | -69:11 | 5X | 5 | 116*119 | 10 | 10C | 1 | .32 | 3 | LH99 | 3.0 | 3.0 | -- | (157) | | | 2060 | | | |
| 130 | 744 | 537 | 5:38.2 | -69:11 | 5X | 5 | 407*394 | 171 | 30C | 6 | .32 | 20 | LH99 | 3.0 | 3.0 | -- | (157) | | | 2060 | | | |
| 124 | 906 | 541 | 5:38.3 | -65:53 | 2X | 2 | 82 77 | 17 | 1L | 17 | .06 | 23 | | | | | | | -- | | | | |
| 125 | 907 | 543 | 5:38.3 | -65:53 | 7X | 3 | 215 205 | 79 | 3L | 26 | .06 | 35 | | | | | | | -- | | | | |
| 129 | 906 | 538 | 5:38.3 | -65:53 | 2X | 2 | 43 39 | 14 | 10C | 1 | .06 | 2 | | | | | | | -- | | | | |
| 130 | 907 | 535 | 5:38.3 | -65:53 | 2X | 2 | 102 91 | 39 | 30C | 1 | .06 | 2 | | | | | | | -- | | | | |
| 124 | 745 | 536 | 5:38.7 | -69:08 | 100* | | 112* 89 | 1268 | 1L | 1268 | .35 | 7050 | LH99.100 | 90.0* | NEB? | (157) | | | | 2060.70 | | | |
| 125 | 745 | 537 | 5:38.7 | -69:08 | 97* | | 283*245 | 3378 | 3L | 1126 | .35 | 6250 | LH99.100 | 90.0* | NEB? | (157) | | | | 2060.70 | | | |
| 124 | 745 | 534 | 5:38.8 | -69:08 | 17X15 | | 115* 87 | 1226 | 1L | 1226 | .35 | 6825 | (LH99.100) | | | 157AB | 3719. | 0.54 | | 2060.70 | | | |
| 125 | 746 | 536 | 5:38.8 | -69:08 | 17X15 | | 350*233 | 4909 | 3L | 1636 | .35 | 9100 | (LH99.100) | | | 157AB | 3719. | 0.41 | | 2060.70 | | | |
| 129 | 746 | 539 | 5:38.8 | -69:08 | 17X15 | | 162*108 | 5643 | 10C | 564 | .35 | 2165 | (LH99.100) | | | 157AB | 3719. | 1.71 | | 2060.70 | | | |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | B0 | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | H1 | NOC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|-------|-----|-----|-------|-----|-----|-----|------|------------|--------|------|------|---------|-------|------|-------------|---------|---|----|
| 130 | 747 | 537 | 5:38.8 | -69:08 | 17X15 | 533 | 335 | 13531 | 30C | 451 | .35 | 1733 | (LM99,100) | | | | 15748 | 3719. | 2.15 | 2060-70 | | | |
| 124 | 670 | 537 | 5:38.9 | -70:42 | 4X5 | 80 | 78 | 14 | 1L | 14 | .30 | 62 | | | | | 213.A | 48.7 | 0.79 | | | | |
| 125 | 672 | 537 | 5:38.9 | -70:42 | 4X5 | 204 | 198 | 67 | 3L | 22 | .30 | 97 | | | | | 213.A | 48.7 | 0.50 | | | | |
| 129 | 671 | 538 | 5:38.9 | -70:42 | 4X5 | 56 | 42 | 62 | 10C | 6 | .30 | 20 | | | | | 213.A | 48.7 | 2.47 | | | | |
| 130 | 672 | 535 | 5:39.0 | -70:42 | 4X5 | 126 | 100 | 151 | 30C | 5 | .30 | 16 | | | | | 213.A | 48.7 | 3.08 | | | | |
| 124 | 747 | 534 | 5:39.2 | -69:06 | 9X9 | 149 | 93 | 896 | 1L | 896 | .35 | 4980 | LM100 | 9.0 | 9.0 | NEB? | (157) | | | 2070 | | | |
| 125 | 747 | 535 | 5:39.2 | -69:06 | 9X9 | 402 | 257 | 2424 | 3L | 808 | .35 | 4480 | LM100 | 9.0 | 9.0 | NEB? | (157) | | | 2070 | | | |
| 129 | 748 | 535 | 5:39.2 | -69:06 | 9X9 | 542 | 123 | 4177 | 10C | 418 | .35 | 1605 | LM100 | 9.0 | 9.0 | NEB? | (157) | | | 2070 | | | |
| 130 | 749 | 532 | 5:39.2 | -69:06 | 9X9 | 878 | 374 | 11603 | 30C | 387 | .35 | 1485 | LM100 | 9.0 | 9.0 | NEB? | (157) | | | 2070 | | | |
| 124 | 726 | 533 | 5:39.5 | -69:32 | 5X5 | 105 | 98 | 70 | 1L | 70 | .29 | 294 | (LM101) | | | | 158C | 257.5 | 0.87 | 2074 | | | |
| 125 | 727 | 534 | 5:39.5 | -69:32 | 5X5 | 300 | 276 | 226 | 3L | 75 | .29 | 315 | (LM101) | | | | 158C | 257.5 | 0.82 | 2074 | | | |
| 129 | 727 | 534 | 5:39.5 | -69:32 | 5X5 | 215 | 152 | 602 | 10C | 60 | .29 | 184 | (LM101) | | | | 158C | 257.5 | 1.40 | 2074 | | | |
| 130 | 728 | 531 | 5:39.5 | -69:32 | 5X5 | 686 | 472 | 1694 | 30C | 56 | .29 | 171 | (LM101) | | | | 158C | 257.5 | 1.50 | 2074 | | | |
| 124 | 728 | 533 | 5:39.5 | -69:30 | 5X6 | 116 | 100 | 159 | 1L | 159 | .29 | 668 | LM101 | 3.0 | 5.0 | 10 | (158) | | | 2074 | | | |
| 125 | 728 | 534 | 5:39.5 | -69:30 | 5X6 | 350 | 273 | 624 | 3L | 208 | .29 | 875 | LM101 | 3.0 | 5.0 | 10 | (158) | | | 2074 | | | |
| 129 | 728 | 534 | 5:39.5 | -69:30 | 5X6 | 312 | 143 | 1304 | 10C | 130 | .29 | 400 | LM101 | 3.0 | 5.0 | 10 | (158) | | | 2074 | | | |
| 130 | 729 | 531 | 5:39.5 | -69:30 | 5X6 | 772 | 479 | 3000 | 30C | 100 | .29 | 306 | LM101 | 3.0 | 5.0 | 10 | (158) | | | 2074 | | | |
| 124 | 730 | 531 | 5:39.9 | -69:28 | 13X12 | 105 | 92 | 590 | 1L | 590 | .29 | 2480 | (LM96,101) | | | | 158.A-D | 864. | 0.35 | 2050-74 | | | |
| 125 | 730 | 532 | 5:39.9 | -69:28 | 13X12 | 286 | 250 | 1945 | 3L | 648 | .29 | 2720 | (LM96,101) | | | | 158.A-D | 864. | 0.32 | 2050-74 | | | |
| 129 | 728 | 531 | 5:39.9 | -69:28 | 13X12 | 140 | 115 | 2767 | 10C | 277 | .29 | 846 | (LM96,101) | | | | 158.A-D | 864. | 1.02 | 2050-74 | | | |
| 130 | 730 | 529 | 5:39.9 | -69:28 | 13X12 | 598 | 339 | 4590 | 30C | 153 | .29 | 468 | (LM96,101) | | | | 158.A-D | 864. | 1.85 | 2050-74 | | | |
| 124 | 831 | 530 | 5:40.0 | -67:24 | 9X7 | 87 | 85 | 45 | 1L | 45 | .12 | 84 | LM102 | 9.0 | 6.0 | 24 | | | | (SAO249336) | | | |
| 125 | 831 | 529 | 5:40.0 | -67:24 | 9X7 | 226 | 224 | 108 | 3L | 36 | .12 | 67 | LM102 | 9.0 | 6.0 | 24 | | | | (SAO249336) | | | |
| 129 | 832 | 531 | 5:40.0 | -67:24 | 9X7 | 94 | 62 | 512 | 10C | 51 | .12 | 82 | LM102 | 9.0 | 6.0 | 24 | | | | (SAO249336) | | | |
| 130 | 832 | 529 | 5:40.0 | -67:24 | 9X7 | 255 | 161 | 1315 | 30C | 44 | .12 | 70 | LM102 | 9.0 | 6.0 | 24 | | | | (SAO249336) | | | |

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| FR. | X | Y | P.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|----|----|---------|------|------|-----|----------|------|---------|---------|------|---------|---------|-------|-------|---------|---------|---------|----|
| 124 | 721 | 529 | 5:40.3 | -69:38 | 5X | 6 | 96* | 91 | 64 | 1L | 64 | .30* | 281 | LH103 | 4.0 | 5.0 | 41 | (160) | | | | 2077-86 | |
| 125 | 721 | 532 | 5:40.3 | -69:38 | 5X | 6 | 259*245 | 189 | 3L | 63 | .30* | 277 | LH103 | 4.0 | 5.0 | 41 | (160) | | | | 2077-86 | | |
| 129 | 721 | 529 | 5:40.3 | -69:38 | 5X | 6 | 163 | 116 | 285 | 10C | 29 | .30* | 90 | LH103 | 4.0 | 5.0 | 41 | (160) | | | | 2077-86 | |
| 130 | 721 | 528 | 5:40.3 | -69:38 | 5X | 6 | 459*315 | 1585 | 30C | 53 | .30* | 168 | LH103 | 4.0 | 5.0 | 41 | (160) | | | | 2077-86 | | |
| 124 | 715 | 529 | 5:40.4 | -69:46 | 6X | 6 | 87* | 86 | 20 | 1L | 20 | .31 | 92 | (LH105) | | | 159.A-L | 102.6 | 1.12 | 2078-84 | | | |
| 125 | 715 | 532 | 5:40.4 | -69:46 | 6X | 6 | 221*220 | 64 | 3L | 21 | .31 | 97 | (LH105) | | | | 159.A-L | 102.6 | 1.05 | 2078-84 | | | |
| 129 | 714 | 529 | 5:40.4 | -69:46 | 6X | 6 | 66* | 67 | -54 | 10C | -5 | .31 | -- | (LH105) | | | 159.A-L | 102.6 | -- | 2078-84 | | | |
| 130 | 716 | 527 | 5:40.4 | -69:46 | 6X | 6 | 243*216 | -431 | 30C | -14 | .31 | -- | (LH105) | | | | 159.A-L | 102.6 | -- | 2078-84 | | | |
| 124 | 732 | 529 | 5:40.5 | -69:25 | 7X | 5 | 104 | 94 | 161 | 1L | 161 | .28* | 644 | LH104 | 6.0 | 3.5 | 48 | (158) | | | | 2081 | |
| 125 | 732 | 530 | 5:40.5 | -69:25 | 7X | 5 | 298*260 | 479 | 3L | 160 | .28* | 640 | LH104 | 6.0 | 3.5 | 48 | (158) | | | | 2081 | | |
| 129 | 732 | 530 | 5:40.5 | -69:25 | 7X | 5 | 213 | 135 | 970 | 10C | 97 | .28* | 285 | LH104 | 6.0 | 3.5 | 48 | (158) | | | | 2081 | |
| 130 | 733 | 527 | 5:40.5 | -69:25 | 7X | 5 | 702 | 417 | 3171 | 30C | 106*.28* | 310 | LH104 | 6.0 | 3.5 | 48 | (158) | | | | 2081 | | |
| 124 | 751 | 526 | 5:40.5 | -69:00 | 3X | 3 | 86* | 85 | 1 | 1L | 1 | .30 | 4 | | | 161 | | 5.7 | 1.3* | | | | |
| 125 | 750 | 527 | 5:40.5 | -69:00 | 3X | 3 | 220*219 | 8 | 3L | 3 | .30 | 12 | | | | 161 | | 5.7 | 0.49* | | | | |
| 129 | 750 | 527 | 5:40.5 | -69:00 | 3X | 3 | 72* | 71 | 9 | 10C | 1 | .30 | 3 | | | 161 | | 5.7 | 1.9* | | | | |
| 130 | 752 | 525 | 5:40.5 | -69:00 | 3X | 3 | 184*195 | 1 | 30C | 0 | .30 | 0 | | | | 161 | | 5.7 | -- | | | | |
| 124 | 716 | 528 | 5:40.6 | -69:45 | 5X | 5 | 87* | 88 | 8 | 1L | 8 | .31 | 37 | LH105 | 4.0 | 4.0 | -- | (159) | | | | 2078-84 | |
| 125 | 716 | 531 | 5:40.6 | -69:45 | 5X | 5 | 233*229 | 34 | 3L | 11 | .31 | 51 | LH105 | 4.0 | 4.0 | -- | (159) | | | | 2078-84 | | |
| 129 | 716 | 530 | 5:40.6 | -69:45 | 5X | 5 | 99 | 82 | 92 | 10C | 9 | .31 | 30 | LH105 | 4.0 | 4.0 | -- | (159) | | | | 2078-84 | |
| 130 | 715 | 527 | 5:40.6 | -69:45 | 5X | 5 | 190*193 | -49 | 30C | -2 | .31 | -- | (LH105) | | | -- | (159) | | | | 2078-84 | | |
| 124 | 732 | 529 | 5:40.6 | -69:24 | 3X | 3 | 104 | 100 | 24 | 1L | 24 | .28 | 96 | (LH104) | | | 158A | 68.9 | 0.72 | 2081 | | | |
| 125 | 733 | 530 | 5:40.6 | -69:24 | 3X | 3 | 308 | 286 | 71 | 3L | 24 | .28 | 96 | (LH104) | | | 158A | 68.9 | 0.72 | 2081 | | | |
| 129 | 732 | 530 | 5:40.6 | -69:24 | 3X | 3 | 213 | 183 | 158 | 10C | 16 | .28 | 47 | (LH104) | | | 158A | 68.9 | 1.47 | 2081 | | | |
| 130 | 733 | 527 | 5:40.6 | -69:24 | 3X | 3 | 702 | 596 | 369 | 30C | 12*.28 | 36 | (LH104) | | | 158A | 68.9 | 1.90 | 2081 | | | | |
| 124 | 707 | 526 | 5:40.7 | -69:55 | 4X | 4 | 81* | 80 | 8 | 1L | 8 | .31 | 37 | | | 172.173 | | 3.3 | 0.09* | | | | |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E,F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | H | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|-------|---------|---------|----|-------|-----|------|-----|------|---------|------|------|---------|-------|-------|------------|---------|---|----|
| 125 | 708 | 528 | 5:40.7 | -69:55 | 4X | 4 | 213*212 | | 17 | 3L | 6 | .31 | 26 | | | | 172.173 | 3.3 | 0.13 | | | | |
| 129 | 708 | 527 | 5:40.7 | -69:55 | 4X | 4 | 47* 49 | | 10 | 10C | 1 | .31 | 3 | | | | 172.173 | 3.3 | 1.00 | | | | |
| 130 | 708 | 525 | 5:40.7 | -69:55 | 4X | 4 | 113*115 | | 5 | 30C | 0 | .31 | 1 | | | | 172.173 | 3.3 | 6.0* | | | | |
| 124 | 720 | 527 | 5:40.8 | -69:38 | 13X12 | 97* | 87 | | 526 | 1L | 526 | .30 | 2315 | (LH103) | | | 160.A-F | 771.9 | 0.33 | 2077-86 | | | |
| 125 | 721 | 530 | 5:40.8 | -69:38 | 13X12 | 28* | 232 | | 1628 | 3L | 543 | .30 | 2385 | (LH103) | | | 160.A-F | 771.9 | 0.32 | | | | |
| 129 | 721 | 527 | 5:40.8 | -69:38 | 13X12 | 128* | 81 | | 3198 | 10C | 320 | .30 | 1014 | (LH103) | | | 160.A-F | 771.9 | 0.76 | 2077-86 | | | |
| 130 | 721 | 527 | 5:40.8 | -69:38 | 13X12 | 545 | 228 | | 8810 | 30C | 294 | .30 | 930 | (LH103) | | | 160.A-F | 771.9 | 0.83 | 2077-86 | | | |
| 125 | 849 | 528 | 5:40.9 | -67:04 | 2X | 2 | 216 212 | | 9 | 3L | 3 | .16 | 7 | -- | | | | | | 2062? | | | |
| 129 | 848 | 526 | 5:40.9 | -67:04 | 2X | 2 | 49 47 | | 8 | 10C | 1 | .16 | 1 | -- | | | | | | 2062? | | | |
| 130 | 848 | 524 | 5:40.9 | -67:04 | 2X | 2 | 121 113 | | 28 | 30C | 1 | .16 | 2 | -- | | | | | | 2062? | | | |
| 124 | 693 | 523 | 5:41.3 | -70:11 | 3X | 3 | 84 81 | | 10 | 1L | 10 | .31 | 46 | | | | 176 | 2.1 | 0.05 | | | | |
| 125 | 695 | 526 | 5:41.3 | -70:11 | 3X | 3 | 210 206 | | 13 | 3L | 4 | .31 | 20 | | | | 176 | 2.1 | 0.11 | | | | |
| 129 | 694 | 525 | 5:41.3 | -70:11 | 3X | 3 | 40* 40 | | 4 | 10C | 0 | .31 | 1 | | | | 176 | 2.1 | 1.6* | | | | |
| 130 | 694 | 523 | 5:41.3 | -70:11 | 3X | 3 | 96* 95 | | 7 | 30C | 0 | .31 | 1 | | | | 176 | 2.1 | 2.8* | | | | |
| 124 | 723 | 525 | 5:41.3 | -69:35 | 17X12 | 90* | 87 | | 716 | 1L | 716 | .30 | 3150 | LH106 | 18.0 | 12.0 | -- | | | (LH101--8) | | | |
| 125 | 724 | 526 | 5:41.3 | -69:35 | 17X12 | 239*233 | | | 3222 | 3L | 1074 | .30 | 4730 | LH106 | 18.0 | 12.0 | -- | | | (LH101--8) | | | |
| 129 | 722 | 526 | 5:41.3 | -69:35 | 17X12 | 119* | 85 | | 3380 | 10C | 338 | .30 | 1072 | LH106 | 18.0 | 12.0 | -- | | | (LH101--8) | | | |
| 130 | 724 | 522 | 5:41.3 | -69:35 | 17X12 | 399*238 | | | 12736 | 30C | 425 | .30 | 1347 | LH106 | 18.0 | 12.0 | -- | | | (LH101--8) | | | |
| 124 | 644 | 529 | 5:41.4 | -71:15 | 12X | 4* | 78* 76 | | 66 | 1L | 66 | .25 | 228 | LH107 | 12.0 | 4.0 | -- | | | 2103 | | | |
| 125 | 644 | 530 | 5:41.4 | -71:15 | 12X | 4* | 192*197 | | 176 | 3L | 59 | .25 | 204 | LH107 | 12.0 | 4.0 | -- | | | 2103 | | | |
| 129 | 645 | 530 | 5:41.4 | -71:15 | 12X | 4* | 35* 37 | | 282 | 10C | 28 | .25 | 73 | LH107 | 12.0 | 4.0 | -- | | | 2103 | | | |
| 130 | 644 | 526 | 5:41.4 | -71:15 | 12X | 4* | 91* 96 | | 645 | 30C | 22 | .25 | 57 | LH107 | 12.0 | 4.0 | -- | | | 2103 | | | |
| 124 | 675 | 526 | 5:41.5 | -70:35 | 2X | 2 | 77* 76 | | 1 | 1L | 1 | .30 | 4 | | | | 218 | 1.9 | 0.4* | | | | |
| 125 | 676 | 527 | 5:41.5 | -70:35 | 2X | 2 | 202 198 | | 11 | 3L | 4 | .30 | 16 | | | | 218 | 1.9 | 0.12* | | | | |
| 129 | 676 | 526 | 5:41.5 | -70:35 | 2X | 2 | 36* 36 | | 0 | 10C | 0 | .30 | -- | | | | 218 | 1.9 | -- | | | | |

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| FR. | X | Y | P.A. | DEC. | *X | *Y | P | BS | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAC NO. | M | SP |
|-----|-----|-----|--------|--------|-------|------|-----------|-----|------|-----|------|-----|------|---------|------|-------|----------|-------|------|---------|---------|----|----|
| 130 | 676 | 524 | 5:11.5 | -70:35 | 2X | 2 | 86* 95 | | 3 | 30C | 0 | .30 | 0 | | | | 218 | 1.9 | 5.9* | | | | |
| 124 | 842 | 527 | 5:11.6 | -71:16 | 14X10 | | 77* 75 | | 142 | 1L | 142 | .25 | 492 | (LH107) | | | 214, A-M | 179.1 | 0.36 | 2103 | | | |
| 125 | 643 | 528 | 5:11.6 | -71:16 | 14X10 | 201 | 192 | | 530 | 3L | 177 | .25 | 613 | (LH107) | | | 214, A-M | 179.1 | 0.29 | 2103 | | | |
| 129 | 643 | 528 | 5:11.6 | -71:16 | 14X10 | | 37* 34 | | 531 | 10C | 53 | .25 | 138 | (LH107) | | | 214, A-M | 179.1 | 1.30 | 2103 | | | |
| 130 | 643 | 525 | 5:11.6 | -71:16 | 14X10 | 105* | 82 | | 1669 | 30C | 55 | .25 | 145 | (LH107) | | | 214, A-M | 179.1 | 1.23 | 2103 | | | |
| 124 | 660 | 528 | 5:11.6 | -70:55 | 3X | 3 | 76* 76 | | 2 | 1L | 2 | .28 | 8 | | | 216 | 0.6 | 0.08* | | | | | |
| 125 | 661 | 523 | 5:11.6 | -70:55 | 3X | 3 | 195 | 192 | 8 | 3L | 3 | .28 | 11 | | | 216 | 0.6 | 0.06* | | | | | |
| 129 | 660 | 526 | 5:11.6 | -70:55 | 3X | 3 | 36* 35 | | 2 | 10C | 0 | .28 | 1 | | | 216 | 0.6 | 1.02* | | | | | |
| 130 | 660 | 524 | 5:11.6 | -70:55 | 3X | 3 | 84* 84 | | 3 | 30C | 0 | .28 | 0 | | | 216 | 0.6 | 2.04* | | | | | |
| 124 | 707 | 524 | 5:11.6 | -69:55 | 4X | 3 | 82* 82 | | -1 | 1L | -1 | .31 | -- | | | 177 | 23.4 | -- | | | | | |
| 125 | 708 | 524 | 5:11.6 | -69:55 | 4X | 3 | 212*213 | | -6 | 3L | -2 | .31 | -- | | | 177 | 23.4 | -- | | | | | |
| 129 | 707 | 524 | 5:11.6 | -69:55 | 4X | 3 | 48* 48 | | 4 | 10C | 0 | .31 | 1 | | | 177 | 23.4 | 17.7* | | | | | |
| 130 | 708 | 522 | 5:11.6 | -69:55 | 4X | 3 | 125*123 | | 18 | 30C | 1 | .31 | 2 | | | 177 | 23.4 | 11.7* | | | | | |
| 124 | 823 | 523 | 5:11.6 | -67:25 | 5X | 5 | 100 | 84 | 244 | 1L | 244 | .05 | 317 | | | | | | | 243336 | 7.2 | A0 | |
| 125 | 831 | 521 | 5:11.6 | -67:25 | 12X | 9 | 277 | 221 | 1640 | 3L | 547 | .05 | 712 | | | | | | | 243336 | 7.2 | A0 | |
| 129 | 830 | 521 | 5:11.6 | -67:25 | 13X14 | | 198 | 51 | 4390 | 10C | 439 | .05 | 531 | | | | | | | 243336 | 7.2 | A0 | |
| 130 | 831 | 519 | 5:11.6 | -67:25 | 14X14 | 602 | 148*23000 | 30C | | | 967* | .05 | 1070 | | | | | | | 243336 | 7.2 | A0 | |
| 124 | 684 | 524 | 5:11.7 | -70:24 | 3X | 3 | 82 | 79 | 10 | 1L | 10 | .31 | 46 | | | 219 | 2.9 | 0.06 | | | | | |
| 125 | 685 | 527 | 5:11.7 | -70:24 | 3X | 3 | 210 | 205 | 22 | 3L | 7 | .31 | 34 | | | 219 | 2.9 | 0.09 | | | | | |
| 129 | 684 | 525 | 5:11.7 | -70:24 | 3X | 3 | 40* 39 | | 6 | 10C | 1 | .31 | 2 | | | 219 | 2.9 | 1.5* | | | | | |
| 130 | 685 | 522 | 5:11.7 | -70:24 | 3X | 3 | 89* 88 | | 6 | 30C | 0 | .31 | 1 | | | 219 | 2.9 | 4.4* | | | | | |
| 124 | 663 | 526 | 5:11.9 | -70:52 | 2X | 2 | 78 | 73 | 18 | 1L | 18 | .27 | 69 | | | (216) | | | | | | | |
| 125 | 663 | 523 | 5:11.9 | -70:52 | 2X | 2 | 201 | 193 | 32 | 3L | 11 | .27 | 41 | | | (216) | | | | | | | |
| 129 | 663 | 525 | 5:11.9 | -70:52 | 2X | 2 | 41 | 31 | 33 | 10C | 3 | .27 | 9 | | | (216) | | | | | | | |
| 130 | 664 | 524 | 5:11.9 | -70:52 | 2X | 2 | 100 | 78 | 82 | 30C | 3 | .27 | 8 | | | (216) | | | | | | | |

NRL REPORT 8206

| FR. | X | Y | R.A. | DEC. | X*Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|------|------|-----|-----|-----|-----|-----|-----|-------------|------|-----|---------|---------|-------|---------|---------|---|------|
| 124 | 867 | 518 | 5:42.0 | -66:40 | 2X 2 | 85 | 82 | 12 | 1L | 12 | .15 | 26 | | | | | | | | -- | | |
| 125 | 869 | 520 | 5:42.0 | -66:40 | 4X 2 | 221 | 210 | 82 | 3L | 27 | .15 | 58 | | | | | | | | -- | | |
| 129 | 868 | 519 | 5:42.0 | -66:40 | 2X 2 | 59 | 43 | 59 | 10C | 6 | .15 | 10 | | | | | | | | -- | | |
| 130 | 868 | 517 | 5:42.0 | -66:40 | 5X 5 | 144 | 102 | 465 | 30C | 16 | .15 | 28 | | | | | | | | -- | | |
| 124 | 980 | 518 | 5:42.0 | -64:22 | 2X 2 | 86 | 80 | 20 | 1L | 20 | .05 | 26 | -- | | | | | | | 2082 | | |
| 125 | 981 | 519 | 5:42.0 | -64:22 | 2X 2 | 216 | 207 | 31 | 3L | 10 | .05 | 13 | -- | | | | | | | 2082 | | |
| 129 | 985 | 519 | 5:42.0 | -64:22 | 2X 2 | 43 | 40 | 12 | 10C | 1 | .05 | 1 | -- | | | | | | | 2082 | | |
| 130 | 984 | 517 | 5:42.0 | -64:22 | 2X 2 | 100 | 95 | 15 | 30C | 1 | .05 | 1 | -- | | | | | | | 2082 | | |
| 124 | 702 | 528 | 5:42.1 | -70:01 | 4X 4 | 80* | 79 | 7 | 1L | 7 | .31 | 32 | | | | 174.175 | 11.7 | 0.37* | | | | |
| 125 | 703 | 523 | 5:42.1 | -70:01 | 4X 4 | 216* | 212 | 28 | 3L | 9 | .31 | 43 | | | | 174.175 | 11.7 | 0.27 | | | | |
| 129 | 702 | 523 | 5:42.1 | -70:01 | 4X 4 | 49* | 46 | 56 | 10C | 6 | .31 | 18 | | | | 174.175 | 11.7 | 0.64 | | | | |
| 130 | 703 | 523 | 5:42.1 | -70:01 | 4X 4 | 124* | 120 | 138 | 30C | 5 | .31 | 15 | | | | 174.175 | 11.7 | 0.78 | | | | |
| 124 | 719 | 522 | 5:42.1 | -69:40 | 4X 4 | 94* | 92 | 13 | 1L | 13 | .30 | 57 | LH108 | 2.0 | 2.0 | -- | (160) | | (LH106) | | | |
| 125 | 721 | 524 | 5:42.1 | -69:40 | 4X 4 | 273 | 258 | 68 | 3L | 23 | .30 | 101 | LH108 | 2.0 | 2.0 | -- | (160) | | (LH106) | | | |
| 129 | 721 | 524 | 5:42.1 | -69:40 | 4X 4 | 136 | 120 | 57 | 10C | 6 | .30 | 18 | LH108 | 2.0 | 2.0 | -- | (160) | | (LH106) | | | |
| 130 | 721 | 521 | 5:42.1 | -69:40 | 4X 4 | 454 | 378 | 309 | 30C | 10 | .30 | 33 | LH108 | 2.0 | 2.0 | -- | (160) | | (LH106) | | | |
| 124 | 755 | 520 | 5:42.2 | -68:56 | 6X 4 | 84* | 83 | 10 | 1L | 10 | .25 | 35 | LH109 | 5.0 | 2.0 | -- | (165) | | 2093 | | | |
| 125 | 755 | 520 | 5:42.2 | -68:56 | 6X 4 | 221* | 216 | 52 | 3L | 17 | .25 | 59 | LH109 | 5.0 | 2.0 | -- | (165) | | 2093 | | | |
| 129 | 755 | 520 | 5:42.2 | -68:56 | 6X 4 | 62* | 61 | 45 | 10C | 5 | .25 | 12 | LH109 | 5.0 | 2.0 | -- | (165) | | 2093 | | | |
| 130 | 755 | 518 | 5:42.2 | -68:56 | 6X 4 | 155* | 159 | 40 | 30C | 1 | .25 | 3 | LH109 | 5.0 | 2.0 | -- | (165) | | 2093 | | | |
| 124 | 640 | 525 | 5:42.3 | -71:20 | 5X 5 | 84 | 77 | 38 | 1L | 38 | .25 | 132 | (LH107.110) | | | | 214CFGH | 93.9 | 0.71 | 2103 | | |
| 125 | 641 | 527 | 5:42.3 | -71:20 | 5X 5 | 218 | 200 | 114 | 3L | 38 | .25 | 132 | (LH107.110) | | | | 214CFGH | 93.9 | 0.71 | 2103 | | |
| 129 | 640 | 525 | 5:42.3 | -71:20 | 5X 5 | 72 | 44 | 195 | 10C | 20 | .25 | 51 | (LH107.110) | | | | 214CFGH | 93.9 | 1.84 | 2103 | | |
| 130 | 641 | 523 | 5:42.3 | -71:20 | 5X 5 | 195 | 109 | 501 | 30C | 17 | .25 | 44 | (LH107.110) | | | | 214CFGH | 93.9 | 2.13 | 2103 | | |
| 124 | 640 | 525 | 5:42.4 | -71:21 | 4X 5 | 84 | 78 | 28 | 1L | 28 | .25 | 97 | LH110 | 2.0 | 3.0 | 5 | (214) | | | | | 2103 |

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| FR. | X | Y | R.A. | DEC. | *X*Y P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | Sao NO. | M | SP |
|-----|-----|-----|--------|--------|--------------|----|------|-----|-----|------|-----|---------|---------|-----|-------|-------|-----------|---------|---------|---|-------------|
| 125 | 639 | 526 | 5:42.4 | -71:21 | 4X 5 20+201 | | 55 | 3L | 18 | .25 | 63 | LH110 | 2.0 3.0 | 5 | (214) | | | | | | 2103 |
| 129 | 640 | 525 | 5:42.4 | -71:21 | 4X 5 72 47 | | 136 | 10C | 14 | .25 | 35 | LH110 | 2.0 3.0 | 5 | (214) | | | | | | 2103 |
| 130 | 639 | 521 | 5:42.4 | -71:21 | 4X 5 10+102 | | 227 | 30C | 8 | .25 | 20 | LH110 | 2.0 3.0 | 5 | (214) | | | | | | 2103 |
| 124 | 741 | 519 | 5:42.4 | -69:13 | 6X 7 99 88 | | 141 | 1L | 141 | .31* | 650 | LH111 | 5.0 6.0 | 26 | | | | | | | 2100 |
| 125 | 742 | 521 | 5:42.4 | -69:13 | 6X 7 268 232 | | 400 | 3L | 133 | .31* | 612 | LH111 | 5.0 6.0 | 26 | | | | | | | 2100 |
| 129 | 742 | 520 | 5:42.4 | -69:13 | 6X 7 156 84 | | 709 | 10C | 71 | .31* | 233 | LH111 | 5.0 6.0 | 26 | | | | | | | 2100 |
| 130 | 742 | 518 | 5:42.4 | -69:13 | 6X 7 490 235 | | 2417 | 30C | 81 | .31* | 265 | LH111 | 5.0 6.0 | 26 | | | | | | | 2100 |
| 124 | 834 | 517 | 5:42.6 | -67:20 | 5X 6 88* 86 | | 27 | 1L | 27 | .14* | 55 | LH112 | 3.0 5.0 | 12 | | | | | | | 2095(+STAR) |
| 125 | 833 | 517 | 5:42.6 | -67:20 | 5X 6 243*241 | | 45 | 3L | 15 | .14* | 31 | LH112 | 3.0 5.0 | 12 | | | | | | | 2095(+STAR) |
| 129 | 835 | 517 | 5:42.6 | -67:20 | 5X 6 93 79 | | 147 | 10C | 15 | .14* | 25 | LH112 | 3.0 5.0 | 12 | | | | | | | 2095(+STAR) |
| 130 | 835 | 515 | 5:42.6 | -67:20 | 5X 6 264*215 | | 655 | 30C | 22 | .14* | 37 | LH112 | 3.0 5.0 | 12 | | | | | | | 2095(+STAR) |
| 124 | 747 | 516 | 5:42.9 | -69:05 | 6X 6 86* 85 | | 52 | 1L | 52 | .25 | 180 | (LH113) | | 164 | | 123.0 | 0.68 | | | | |
| 125 | 748 | 518 | 5:42.9 | -69:05 | 6X 6 236 225 | | 58 | 3L | 19 | .25 | 66 | (LH113) | | 164 | | 123.0 | 1.86 | | | | |
| 129 | 749 | 517 | 5:42.9 | -69:05 | 6X 6 84 67 | | 159 | 10C | 16 | .25 | 41 | (LH113) | | 164 | | 123.0 | 2.98 | | | | |
| 130 | 749 | 515 | 5:42.9 | -69:05 | 6X 6 231 176 | | 401 | 30C | 13 | .25 | 35 | (LH113) | | 164 | | 123.0 | 3.53 | | | | |
| 124 | 748 | 515 | 5:43.1 | -69:04 | 4X 4 87* 86 | | 14 | 1L | 14 | .25 | 49 | LH113 | 2.0 1.5 | -- | (164) | | | | | | |
| 125 | 747 | 519 | 5:43.1 | -69:04 | 4X 4 229*227 | | 35 | 3L | 12 | .25 | 42 | LH113 | 2.0 1.5 | -- | (164) | | | | | | |
| 129 | 749 | 517 | 5:43.1 | -69:04 | 4X 4 83* 72 | | 66 | 10C | 7 | .25 | 17 | LH113 | 2.0 1.5 | -- | (164) | | | | | | |
| 130 | 749 | 514 | 5:43.1 | -69:04 | 4X 4 198*184 | | 197 | 30C | 7 | .25 | 17 | LH113 | 2.0 1.5 | -- | (164) | | | | | | |
| 124 | 753 | 516 | 5:43.2 | -68:58 | 3X 3 87 85 | | 5 | 1L | 5 | .25 | 17 | (LH109) | | 165 | | 12.7 | 0.73+2093 | | | | |
| 125 | 753 | 516 | 5:43.2 | -68:58 | 3X 3 221*218 | | 15 | 3L | 5 | .25 | 17 | (LH109) | | 165 | | 12.7 | 0.73 2093 | | | | |
| 129 | 753 | 516 | 5:43.2 | -68:58 | 3X 3 74 67 | | 29 | 10C | 3 | .25 | 8 | (LH109) | | 165 | | 12.7 | 1.68 2093 | | | | |
| 130 | 753 | 514 | 5:43.2 | -68:58 | 3X 3 208 183 | | 71 | 30C | 2 | .25 | 6 | (LH109) | | 165 | | 12.7 | 2.03 2093 | | | | |
| 124 | 807 | 513 | 5:43.4 | -67:52 | 5X 4 95 88 | | 39 | 1L | 39 | .12 | 73 | LH114 | 3.0 2.0 | 8 | (70) | | | | | | |
| 125 | 808 | 514 | 5:43.4 | -67:52 | 5X 4 241*233 | | 127 | 3L | 42 | .12 | 78 | LH114 | 3.0 2.0 | 8 | (70) | | | | | | |

NRL REPORT 8206

| FR. | X | Y | P.A. | DEC. | *X*Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | H1 | NOC NO. | SAC NO. | M | SP |
|-----|-----|-----|--------|--------|------|-----|-----|------|-----|-----|------|-----|---------|------|------|-------|------|------|---------|---------|---|----|
| 129 | 808 | 514 | 5:43.4 | -67:52 | 5X 4 | 112 | 74 | 210 | 10C | 22 | .12 | 35 | LM114 | 3.0 | 2.0 | 8 | (70) | | | | | |
| 130 | 809 | 512 | 5:43.4 | -67:52 | 5X 4 | 335 | 192 | 779 | 30C | 26 | .12 | 41 | LM114 | 3.0 | 2.0 | 8 | (70) | | | | | |
| 124 | 801 | 513 | 5:43.5 | -67:51 | 8X 8 | 95 | 84 | 96 | 1L | 96 | .12 | 179 | (LM114) | | | 70 | 240. | 1.34 | | | | |
| 125 | 808 | 514 | 5:43.5 | -67:51 | 8X 8 | 252 | 220 | 451 | 3L | 150 | .12 | 279 | (LM114) | | | 70 | 240. | 0.87 | | | | |
| 129 | 808 | 514 | 5:43.5 | -67:51 | 8X 8 | 112 | 52 | 747 | 10C | 75 | .12 | 119 | (LM114) | | | 70 | 240. | 2.02 | | | | |
| 130 | 809 | 512 | 5:43.5 | -67:51 | 8X 8 | 335 | 125 | 2504 | 30C | 83 | .12 | 133 | (LM114) | | | 70 | 240. | 1.80 | | | | |
| 124 | 714 | 515 | 5:43.6 | -69:46 | 5X 5 | 82 | 81 | 23 | 1L | 23 | .31 | 106 | | | | 163 | 63.0 | 0.59 | | | | |
| 125 | 716 | 516 | 5:43.6 | -69:46 | 5X 5 | 218 | 216 | 32 | 3L | 11 | .31 | 49 | | | | 163 | 63.0 | 1.28 | | | | |
| 129 | 715 | 516 | 5:43.6 | -69:46 | 5X 5 | 58 | 54 | 27 | 10C | 3 | .31 | 9 | | | | 163 | 63.0 | 7.0 | | | | |
| 130 | 715 | 514 | 5:43.6 | -69:46 | 5X 5 | 139 | 128 | 92 | 30C | 3 | .31 | 10 | | | | 163 | 63.0 | 6.3 | | | | |
| 124 | 806 | 510 | 5:43.6 | -66:17 | 2X 2 | 88 | 87 | 8 | 1L | 8 | .14 | 16 | (LM115) | | | 72 | 1.9 | 0.12 | | | | |
| 125 | 807 | 511 | 5:43.6 | -66:17 | 2X 2 | 228 | 227 | 12 | 3L | 4 | .14 | 8 | (LM115) | | | 72 | 1.9 | 0.23 | | | | |
| 129 | 807 | 514 | 5:43.6 | -66:17 | 2X 2 | 167 | 159 | 91 | 10C | 9 | .14 | 16 | (LM115) | | | 72 | 1.9 | 0.12 | | | | |
| 130 | 807 | 511 | 5:43.6 | -66:17 | 2X 2 | 176 | 182 | 59 | 30C | 2 | .14 | 3 | (LM115) | | | 72 | 1.9 | 0.56 | | | | |
| 124 | 827 | 510 | 5:43.9 | -67:27 | 3X 3 | 85 | 85 | 3 | 1L | 3 | .10 | 5 | | | | 71 | 3.4 | 0.7* | | | | |
| 125 | 828 | 511 | 5:43.9 | -67:27 | 3X 3 | 226 | 226 | 11 | 3L | 4 | .10 | 6 | | | | 71 | 3.4 | 0.55 | | | | |
| 129 | 827 | 510 | 5:43.9 | -67:27 | 3X 3 | 59 | 57 | 10 | 10C | 1 | .10 | 2 | | | | 71 | 3.4 | 2.30 | | | | |
| 130 | 827 | 508 | 5:43.9 | -67:27 | 3X 3 | 143 | 138 | 22 | 30C | 1 | .10 | 1 | | | | 71 | 3.4 | 3.2* | | | | |
| 124 | 885 | 510 | 5:44.0 | -66:19 | 7X10 | 90 | 84 | 117 | 1L | 117 | .14* | 240 | LM115 | 6.0 | 10.0 | 14 | (72) | | | | | |
| 125 | 885 | 509 | 5:44.0 | -66:19 | 7X10 | 238 | 222 | 432 | 3L | 144 | .14* | 295 | LM115 | 6.0 | 10.0 | 14 | (72) | | | | | |
| 129 | 886 | 513 | 5:44.0 | -66:19 | 7X10 | 112 | 77 | 1539 | 10C | 154 | .14* | 263 | LM115 | 6.0 | 10.0 | 14 | (72) | | | | | |
| 130 | 885 | 509 | 5:44.0 | -66:19 | 7X10 | 231 | 161 | 1725 | 30C | 57 | .14* | 98 | LM115 | 6.0 | 10.0 | 14 | (72) | | | | | |
| 124 | 872 | 507 | 5:44.6 | -66:38 | 3X 3 | 87 | 83 | 33 | 1L | 33 | .12 | 61 | | | | | | | | | | -- |
| 125 | 873 | 512 | 5:44.6 | -66:38 | 3X 7 | 221 | 215 | 86 | 3L | 29 | .12 | 54 | | | | | | | | | | -- |
| 129 | 870 | 506 | 5:44.6 | -66:38 | 2X 2 | 46 | 44 | 6 | 10C | 1 | .12 | 1 | | | | | | | | | | -- |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LM NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|----|----|-----|-----|------|-----|-----|------|-----|--------|------|-----|---------|------|-------|---------|---------|----|----|
| 120 | 871 | 505 | 5:44.6 | -66:38 | 2X | 2 | 110 | 102 | 29 | 30C | 1 | .12 | 2 | | | | | | | -- | | | |
| 124 | 915 | 506 | 5:44.7 | -65:45 | 3X | 3 | 87 | 84 | 10 | 1L | 10 | .05 | 13 | | | | | | | 249346 | 4.5 | A5 | |
| 125 | 915 | 512 | 5:44.7 | -65:45 | 3X | 2 | 220 | 211 | 45 | 3L | 15 | .05 | 20 | | | | | | | 249346 | 4.5 | A5 | |
| 129 | 915 | 506 | 5:44.7 | -65:45 | 2X | 2 | 47 | 38 | 35 | 10C | 4 | .05 | 4 | | | | | | | 249346 | 4.5 | A5 | |
| 120 | 915 | 505 | 5:44.7 | -65:45 | 3X | 4 | 122 | 90 | 226 | 30C | 8 | .05 | 9 | | | | | | | 249346 | 4.5 | A5 | |
| 124 | 732 | 509 | 5:44.8 | -69:23 | 3X | 3 | 81 | 82 | -3 | 1L | -3 | .25 | -- | | | | 166.167 | 3.0 | -- | | | | |
| 125 | 733 | 511 | 5:44.8 | -69:23 | 3X | 3 | 221 | 216 | 11 | 3L | 4 | .25 | 13 | | | | 166.167 | 3.0 | 0.24 | | | | |
| 129 | 734 | 510 | 5:44.8 | -69:23 | 3X | 3 | 51 | 48 | 5 | 10C | 1 | .25 | 1 | | | | 166.167 | 3.0 | 2.31* | | | | |
| 130 | 734 | 508 | 5:44.8 | -69:23 | 3X | 3 | 119 | 116 | 12 | 30C | 0 | .25 | 1 | | | | 166.167 | 3.0 | 2.89 | | | | |
| 124 | 839 | 505 | 5:45.0 | -67:14 | 8X | 7 | 101 | 92 | 207 | 1L | 207 | .08* | 312 | LM116 | 5.0 | 9.0 | 34 | (74) | | | | | |
| 125 | 839 | 506 | 5:45.0 | -67:14 | 8X | 7 | 271 | 255 | 584 | 3L | 195 | .08* | 294 | LM116 | 5.0 | 9.0 | 34 | (74) | | | | | |
| 129 | 839 | 506 | 5:45.0 | -67:14 | 8X | 7 | 140 | 94 | 1213 | 10C | 121 | .08* | 165 | LM116 | 5.0 | 9.0 | 34 | (74) | | | | | |
| 130 | 840 | 505 | 5:45.0 | -67:14 | 8X | 7 | 539 | 254 | 6109 | 30C | 204 | .08* | 277 | LM116 | 5.0 | 9.0 | 34 | (74) | | | | | |
| 124 | 848 | 504 | 5:45.2 | -67:03 | 2X | 2 | 92 | 83 | 23 | 1L | 23 | .10 | 39 | | | | | | | -- | | | |
| 125 | 849 | 505 | 5:45.2 | -67:03 | 3X | 3 | 241 | 220 | 97 | 3L | 32 | .10 | 54 | | | | | | | -- | | | |
| 129 | 849 | 505 | 5:45.2 | -67:03 | 4X | 3 | 73 | 48 | 152 | 10C | 15 | .10 | 22 | | | | | | | -- | | | |
| 130 | 850 | 503 | 5:45.2 | -67:03 | 4X | 4 | 187 | 123 | 436 | 30C | 15 | .10 | 21 | | | | | | | -- | | | |
| 124 | 714 | 507 | 5:45.8 | -69:46 | 5X | 4 | 83 | 82 | 9 | 1L | 9 | .31 | 41 | | | | 168.48 | 22.8 | 0.55* | | | | |
| 125 | 715 | 508 | 5:45.8 | -69:46 | 5X | 4 | 221 | 215 | 48 | 3L | 16 | .31 | 74 | | | | 168.48 | 22.8 | 0.31 | | | | |
| 129 | 715 | 507 | 5:45.8 | -69:46 | 5X | 4 | 54 | 44 | 57 | 10C | 6 | .31 | 19 | | | | 168.48 | 22.8 | 1.22 | | | | |
| 130 | 715 | 504 | 5:45.8 | -69:46 | 5X | 4 | 128 | 106 | 154 | 30C | 5 | .31 | 17 | | | | 168.48 | 22.8 | 1.36 | | | | |
| 124 | 843 | 501 | 5:45.8 | -67:09 | 6X | 13 | 91 | 87 | 199 | 1L | 199 | .08 | 300 | LM116 | | | 74.48 | 93.3 | 0.31 | | | | |
| 125 | 844 | 502 | 5:45.8 | -67:09 | 6X | 13 | 241 | 235 | 510 | 3L | 170 | .08 | 256 | LM116 | | | 74.48 | 93.3 | 0.37 | | | | |
| 129 | 840 | 505 | 5:45.8 | -67:09 | 6X | 13 | 134 | 84 | 1297 | 10C | 130 | .08 | 176 | LM116 | | | 74.48 | 93.3 | 0.53 | | | | |
| 130 | 840 | 502 | 5:45.8 | -67:09 | 6X | 13 | 327 | 264 | 3167 | 30C | 106 | .08 | 144 | LM116 | | | 74.48 | 93.3 | 0.65 | | | | |

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| FR. | X | Y | P.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAD NO. | M | S |
|-----|-----|-----|--------|--------|--------|---------|-----|----|------|-----|-----|-----|-----|--------|------|----|--------|-----|-------|---------|---------|----|---|
| 129 | 810 | 501 | 5:46.1 | -67:50 | 2X 2 | 54 | 45 | | 33 | 10C | 3 | .05 | 4 | | | | | | | 249353? | 8.1 | A0 | |
| 130 | 810 | 499 | 5:46.1 | -67:50 | 3X 3 | 134 | 110 | | 112 | 30C | 4 | .05 | 5 | | | | | | | 249353? | 8.1 | A0 | |
| 125 | 810 | 503 | 5:46.1 | -67:49 | 2X 2 | 226 | 218 | | 27 | 3L | 9 | .05 | 12 | | | | | | | 249353? | 8.1 | A0 | |
| 130 | 822 | 497 | 5:46.2 | -67:44 | 2X 2 | 130 | 112 | | 68 | 30C | 2 | .05 | 3 | | | | | | | 249353? | 8.1 | A0 | |
| 129 | 822 | 499 | 5:46.2 | -67:36 | 2X 2 | 54 | 46 | | 29 | 10C | 3 | .05 | 4 | | | | | | | 249353? | 8.1 | A0 | |
| 124 | 822 | 499 | 5:46.6 | -67:39 | 2X 2 | 85 | 83 | | 7 | 1L | 7 | .05 | 9 | | | | | | | 249353? | 8.1 | A0 | |
| 125 | 819 | 499 | 5:46.6 | -67:39 | 3X 2 | 226 | 214 | | 42 | 3L | 14 | .05 | 18 | | | | | | | 249353? | 8.1 | A0 | |
| 124 | 723 | 501 | 5:46.7 | -69:34 | 3X 3 | 83* | 83 | | 1 | 1L | 1 | .27 | 4 | | | | 169A-C | 6.8 | 1.77* | | | | |
| 125 | 723 | 499 | 5:46.7 | -69:34 | 3X 3 | 212*213 | | | 3 | 3L | 1 | .27 | 4 | | | | 169A-C | 6.8 | 1.78* | | | | |
| 129 | 724 | 501 | 5:46.7 | -69:34 | 3X 3 | 39 | 38 | | 4 | 10C | 0 | .27 | 1 | | | | 169A-C | 6.8 | 6.0* | | | | |
| 130 | 724 | 499 | 5:46.7 | -69:34 | 3X 3 | 95 | 94 | | 5 | 30C | 0 | .27 | 0 | | | | 169A-C | 6.8 | 14.2* | | | | |
| 124 | 827 | 487 | 5:47.6 | -67:28 | 2X 2 | 90 | 83 | | 24 | 1L | 24 | .08 | 36 | -- | | | | | | 2117 | | | |
| 125 | 829 | 487 | 5:47.6 | -67:28 | 5X 3 | 228 | 222 | | 63 | 3L | 21 | .08 | 32 | -- | | | | | | 2117 | | | |
| 129 | 829 | 494 | 5:47.6 | -67:28 | 2X 2 | 54 | 46 | | 27 | 10C | 3 | .08 | 4 | -- | | | | | | 2117 | | | |
| 130 | 828 | 491 | 5:47.6 | -67:28 | 2X 2 | 127 | 111 | | 63 | 30C | 2 | .08 | 3 | -- | | | | | | 2117 | | | |
| 124 | 801 | 494 | 5:47.8 | -68:00 | 3X 4 | 91 | 83 | | 62 | 1L | 62 | .11 | 110 | | | | | | | -- | | | |
| 125 | 802 | 495 | 5:47.8 | -68:00 | 5X 4 | 239 | 218 | | 243 | 3L | 81 | .11 | 143 | | | | | | | -- | | | |
| 129 | 801 | 494 | 5:47.8 | -68:00 | 5X 5 | 68 | 44 | | 331 | 10C | 33 | .11 | 51 | | | | | | | -- | | | |
| 130 | 801 | 491 | 5:47.8 | -68:00 | 7X 7 | 177 | 110 | | 1370 | 30C | 46 | .11 | 70 | | | | | | | -- | | | |
| 124 | 983 | 486 | 5:47.9 | -64:25 | 5X 6 | 92 | 82 | | 149 | 1L | 149 | .05 | 194 | | | | | | | -- | | | |
| 125 | 984 | 489 | 5:47.9 | -64:25 | 9X 7 | 246 | 223 | | 750 | 3L | 250 | .05 | 325 | | | | | | | -- | | | |
| 129 | 984 | 489 | 5:47.9 | -64:25 | 9X 8 | 90 | 40 | | 1542 | 10C | 154 | .05 | 187 | | | | | | | -- | | | |
| 130 | 985 | 487 | 5:47.9 | -64:25 | 11X 11 | 245 | 94 | | 6050 | 30C | 202 | .05 | 244 | | | | | | | -- | | | |
| 124 | 708 | 495 | 5:48.4 | -69:53 | 3X 3 | 82 | 81 | | 2 | 1L | 2 | .30 | 9 | | | | 179A-D | 4.6 | 0.5* | | | | |
| 25 | 709 | 496 | 5:48.4 | -69:53 | 3X 3 | 216*212 | | | 18 | 3L | 6 | .30 | 28 | | | | 179A-D | 4.6 | 0.17 | | | | |

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| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|-------|----|------|-----|--------|-----|-------|-----|-------|-------------|------|-----|--------|---------|-------|---------|---------|---|---------------|
| 129 | 709 | 495 | 5:48.4 | -69:53 | 3X | 3 | 52 | 48 | 16 | 10C | 2 | .30 | 5 | | | | 179A-0 | 4.6 | 0.90 | | | | |
| 130 | 709 | 493 | 5:48.4 | -69:53 | 3X | 3 | 122 | 112 | 37 | 30C | 1 | .30 | 4 | | | | 179A-0 | 4.6 | 1.18 | | | | |
| 124 | 878 | 484 | 5:49.0 | -66:28 | 2X | 2 | 86 | 82 | 13 | 1L | 13 | .07 | 19 | | | | | | | | | | -- |
| 125 | 878 | 484 | 5:49.0 | -66:28 | 2X | 2 | 224 | 216 | 28 | 3L | 9 | .07 | 13 | | | | | | | | | | -- |
| 129 | 879 | 485 | 5:49.0 | -66:28 | 2X | 2 | 44 | 39 | 18 | 10C | 2 | .07 | 2 | | | | | | | | | | -- |
| 130 | 879 | 483 | 5:49.0 | -66:28 | 2X | 2 | 106 | 93 | 45 | 30C | 2 | .07 | 2 | | | | | | | | | | -- |
| 124 | 698 | 492 | 5:49.4 | -70:05 | 4X | 6 | 96 | 89 | 62 | 1L | 62 | .30 | 272 | LH117 | 2.0 | 5.0 | 23 | (180) | | | | | 2122 |
| 125 | 698 | 492 | 5:49.4 | -70:05 | 4X | 6 | 257 | 247 | 174 | 3L | 58 | .30 | 255 | LH117 | 2.0 | 5.0 | 23 | (180) | | | | | 2122 |
| 129 | 700 | 493 | 5:49.4 | -70:05 | 4X | 6 | 148 | 85 | 462 | 10C | 46 | .30 | 146 | LH117 | 2.0 | 5.0 | 23 | (180) | | | | | 2122 |
| 130 | 700 | 490 | 5:49.4 | -70:05 | 4X | 6 | 459 | 240 | 1361 | 30C | 45 | .30 | 144 | LH117 | 2.0 | 5.0 | 23 | (180) | | | | | 2122 |
| 124 | 698 | 492 | 5:49.5 | -70:05 | 14X11 | | 96 | 81 | 408 | 1L | 408 | .30 | 1795 | (LH117,118) | | | | 180.A-C | 337.8 | 0.19 | | | 2122 |
| 125 | 698 | 492 | 5:49.5 | -70:05 | 14X11 | | 257 | 210 | 2016 | 3L | 672 | .30 | 2960 | (LH117,118) | | | | 180.A-C | 337.8 | 0.11 | | | 2122 |
| 129 | 700 | 493 | 5:49.5 | -70:05 | 14X11 | | 148 | 43 | 2569 | 10C | 257 | .30 | 815 | (LH117,118) | | | | 180.A-C | 337.8 | 0.42 | | | 2122 |
| 130 | 700 | 490 | 5:49.5 | -70:05 | 14X11 | | 459 | 106 | 7048 | 30C | 235 | .30 | 745 | (LH117,118) | | | | 180.A-C | 337.8 | 0.45 | | | 2122 |
| 124 | 698 | 490 | 5:49.8 | -70:05 | 45 | | 93 | 84 | 200 | 1L | 200 | .30 | 880 | LH117.118 | 26.0 | | 32 | (180) | | | | | 2122 |
| 125 | 698 | 490 | 5:49.8 | -70:05 | 40 | | 257 | 224 | 666 | 3L | 222 | .30 | 977 | LH117.118 | 26.0 | | 32 | (180) | | | | | 2122 |
| 129 | 700 | 491 | 5:49.8 | -70:05 | 41 | | 115 | 68 | 720 | 10C | 72 | .30 | 228 | LH117.118 | 26.0 | | 32 | (180) | | | | | 2122 |
| 130 | 700 | 488 | 5:49.8 | -70:05 | 45 | | 284 | 189 | 1360 | 30C | 45 | .30 | 144 | LH117.118 | 26.0 | | 32 | (180) | | | | | 2122 |
| 124 | 743 | 488 | 5:49.9 | -69:09 | 2X | 2 | 83 | 82 | 1 | 1L | 1 | .18 | 2 | | | | 181 | 0.1 | 0.04 | | | | |
| 125 | 744 | 489 | 5:49.9 | -69:09 | 2X | 2 | 216 | 215 | 3 | 3L | 1 | .18 | 2 | | | | 181 | 0.1 | 0.02 | | | | |
| 129 | 744 | 486 | 5:49.9 | -69:09 | 2X | 2 | 34 | 34 | 1 | 10C | 0 | .18 | 0 | | | | 181 | 0.1 | 0.25 | | | | |
| 130 | 744 | 484 | 5:49.9 | -69:09 | 2X | 2 | 86 | 85 | 3 | 30C | 0 | .18 | 0 | | | | 181 | 0.1 | 0.25 | | | | |
| 124 | 854 | 480 | 5:49.9 | -66:55 | 17X16 | | 817 | 83 | 57000 | 1L | 57000 | .05 | 74000 | | | | | | | | | | 249368 5.2 85 |
| 125 | 855 | 481 | 5:49.9 | -66:55 | 21X21 | | 1127 | 225 | 109200 | 3L | 36400 | .05 | 47400 | | | | | | | | | | 249368 5.2 85 |
| 129 | 855 | 481 | 5:49.9 | -66:55 | 23X21 | | 1103 | 441 | 43000 | 10C | 14300 | .05 | 17300 | | | | | | | | | | 249368 5.2 85 |

NRL REPORT 8206

| FR. | X | Y | R.A. | DEC. | *X*Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|-----------|-----------|------|------|------|------|-----|-----------|--------|-------|----|-------|----|----|---------|---------|-----|----|
| 120 | 856 | 479 | 5:49.9 | -66:55 | 28X271023 | 103198000 | 30C | 6600 | 0.05 | 8000 | | | | | | | | | | 249368 | 5.2 | B5 |
| 124 | 787 | 483 | 5:50.2 | -68:15 | 5X 5 | 87* 85 | 28 | 1L | 28 | .12 | 52 | LM119 | 3.0 | 3.0 | 6 | | | | | | | |
| 125 | 787 | 484 | 5:50.2 | -68:15 | 5X 5 | 226*222 | 17 | 3L | 6 | .12 | 11 | LM119 | 3.0 | 3.0 | 6 | | | | | | | |
| 129 | 787 | 483 | 5:50.2 | -68:15 | 5X 5 | 59* 52 | 56 | 10C | 6 | .12 | 9 | LM119 | 3.0 | 3.0 | 6 | | | | | | | |
| 130 | 788 | 480 | 5:50.2 | -68:15 | 5X 5 | 157*136 | 121 | 30C | 4 | .12 | 6 | LM119 | 3.0 | 3.0 | 6 | | | | | | | |
| 124 | 698 | 488 | 5:50.3 | -70:05 | 5X 5 | 87* 86 | 21 | 1L | 21 | .30 | 92 | LM118 | 4.0 | 4.0 | 9 | (180) | | | | | | |
| 125 | 698 | 488 | 5:50.3 | -70:05 | 5X 5 | 229*223 | 74 | 3L | 25 | .30 | 110 | LM118 | 4.0 | 4.0 | 9 | (180) | | | | | | |
| 129 | 700 | 489 | 5:50.3 | -70:05 | 5X 5 | 72* 78 | -156 | 10C | -16 | .30 | -- | LM118 | 4.0 | 4.0 | 9 | (180) | | | | | | |
| 130 | 700 | 485 | 5:50.3 | -70:05 | 5X 5 | 125*149 | -186 | 30C | -6 | .30 | -- | LM118 | 4.0 | 4.0 | 9 | (180) | | | | | | |
| 124 | 935 | 479 | 5:50.5 | -65:16 | 4X 4 | 86 81 | 41 | 1L | 41 | .05 | 53 | | | | | | | | 249373 | 8.0 | A0 | |
| 125 | 936 | 475 | 5:50.5 | -65:16 | 4X 4 | 231 216 | 149 | 3L | 50 | .05 | 65 | | | | | | | | 249373 | 8.0 | A0 | |
| 129 | 938 | 475 | 5:50.5 | -65:16 | 4X 4 | 58 38 | 221 | 10C | 22 | .05 | 27 | | | | | | | | 249373 | 8.0 | A0 | |
| 130 | 939 | 473 | 5:50.5 | -65:16 | 7X 6 | 143 91 | 870 | 30C | 29 | .05 | 36 | | | | | | | | 249373 | 8.0 | A0 | |
| 129 | 790 | 481 | 5:50.7 | -68:11 | 49* | 72* 56 | 101 | 10C | 10 | .12 | 16 | LM119.120 | 51.0* | 51.0* | 14 | | | | | | | |
| 130 | 791 | 479 | 5:50.7 | -68:11 | 48* | 190*140 | 336 | 30C | 11 | .12 | 18 | LM119.120 | 51.0* | 51.0* | 14 | | | | | | | |
| 124 | 790 | 480 | 5:50.7 | -68:10 | 13X 3* | 88* 87 | 31 | 1L | 31 | .12* | 58 | LM120 | 14.0 | 3.0 | 8 | | | | | | | |
| 125 | 791 | 483 | 5:50.7 | -68:10 | 13X 3* | 241 226 | 102 | 3L | 34 | .12* | 63 | LM120 | 14.0 | 3.0 | 8 | | | | | | | |
| 129 | 791 | 481 | 5:50.7 | -68:10 | 13X 3* | 75 57 | 117 | 10C | 12 | .12* | 19 | LM120 | 14.0 | 3.0 | 8 | | | | | | | |
| 130 | 792 | 479 | 5:50.7 | -68:10 | 13X 3* | 195 140 | 414 | 30C | 14 | .12* | 22 | LM120 | 14.0 | 3.0 | 8 | | | | | | | |
| 124 | 787 | 472 | 5:52.5 | -68:14 | 13X 5 | 91 86 | 126 | 1L | 126 | .12 | 234 | LM121 | 14.0 | 3.0 | 16 | | | | | | | |
| 125 | 789 | 473 | 5:52.5 | -68:14 | 13X 5 | 236*232 | 208 | 3L | 59 | .12 | 128 | LM121 | 14.0 | 3.0 | 16 | | | | | | | |
| 129 | 790 | 472 | 5:52.5 | -68:14 | 13X 5 | 71* 57 | 514 | 10C | 51 | .12 | 82 | LM121 | 14.0 | 3.0 | 16 | | | | | | | |
| 130 | 790 | 469 | 5:52.5 | -68:14 | 13X 5 | 196 136 | 1466 | 30C | 49 | .12 | 78 | LM121 | 14.0 | 3.0 | 16 | | | | | | | |
| 124 | 905 | 452 | 5:55.1 | -65:55 | 8X 8 | 93 87 | 94 | 1L | 94 | .05 | 122 | -- | | | | | | | 2138? | | | |
| 125 | 904 | 453 | 5:55.1 | -65:55 | 8X 8 | 248 225 | 532 | 3L | 177 | .05 | 230 | -- | | | | | | | 2138? | | | |

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| FR. | X | Y | P.A. | DEC. | *X*Y | P | BG | V | E.F | V/E | RE | UF | LH NO. | SIZE | BS | N NO. | HA | HI | NOC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|-------|-----|-----|-------|-----|------|-----|------|---------|------|-----|-------|------|------|---------|---------|----|----|
| 129 | 905 | 454 | 5:55.1 | -65:55 | 6X 6 | 95 | 37 | 925 | 10C | 93 | .05 | 112 | -- | | | | | | 2138? | | | |
| 130 | 906 | 452 | 5:55.1 | -65:55 | 9X 9 | 275 | 91 | 4750 | 30C | 150 | .05 | 192 | -- | | | | | | 2138? | | | |
| 124 | 786 | 455 | 5:56.2 | -68:13 | 4X 3 | 96 | 91 | 15 | 1L | 15 | .10 | 25 | LH122 | 2.0 | 1.5 | 4 | (75) | | | | | |
| 125 | 786 | 456 | 5:56.2 | -68:13 | 4X 3 | 245 | 239 | 54 | 3L | 18 | .10 | 30 | LH122 | 2.0 | 1.5 | 4 | (75) | | | | | |
| 129 | 788 | 455 | 5:56.2 | -68:13 | 4X 3 | 81 | 61 | 88 | 10C | 9 | .10 | 13 | LH122 | 2.0 | 1.5 | 4 | (75) | | | | | |
| 130 | 788 | 453 | 5:56.2 | -68:13 | 4X 3 | 220 | 157 | 238 | 30C | 8 | .10 | 12 | LH122 | 2.0 | 1.5 | 4 | (75) | | | | | |
| 124 | 787 | 455 | 5:56.2 | -68:12 | 6X 7 | 94 | 88 | 66 | 1L | 66 | .10 | 111 | (LH122) | | | 75AB | 38.3 | 0.35 | | | | |
| 125 | 787 | 456 | 5:56.2 | -68:12 | 6X 7 | 248 | 233 | 210 | 3L | 70 | .10 | 118 | (LH122) | | | 75AB | 38.3 | 0.32 | | | | |
| 129 | 788 | 455 | 5:56.2 | -68:12 | 6X 7 | 81 | 46 | 333 | 10C | 33 | .10 | 49 | (LH122) | | | 75AB | 38.3 | 0.78 | | | | |
| 130 | 788 | 453 | 5:56.2 | -68:12 | 6X 7 | 220 | 114 | 857 | 30C | 29 | .10 | 42 | (LH122) | | | 75AB | 38.3 | 0.91 | | | | |
| 124 | 893 | 396 | 6:06.1 | -66:02 | 10X 7 | 136 | 91 | 1190 | 1L | 1190 | .05 | 1550 | | | | | | | 249448 | 5.8 | B9 | |
| 125 | 894 | 397 | 6:06.1 | -66:02 | 12X10 | 432 | 242 | 5205 | 3L | 1735 | .05 | 2260 | | | | | | | 249448 | 5.8 | B9 | |
| 129 | 874 | 397 | 6:06.1 | -66:02 | 14X14 | 623 | 39 | 23800 | 10C | 2380 | .05 | 2880 | | | | | | | 249448 | 5.8 | B9 | |
| 130 | 895 | 395 | 6:06.1 | -66:02 | 16X15 | 873 | 92 | 53900 | 30C | 1797 | .05 | 2175 | | | | | | | 249448 | 5.8 | B9 | |
| 124 | 751 | 400 | 6:09.1 | -68:50 | 12X11 | 399 | 86 | 4918 | 1L | 4918 | .05 | 6400 | | | | | | | 249461 | 5.2 | B9 | |
| 125 | 752 | 402 | 6:09.1 | -68:50 | 15X15 | 902 | 230 | 16440 | 3L | 5480 | .05 | 7120 | | | | | | | 249461 | 5.2 | B9 | |
| 129 | 752 | 401 | 6:09.1 | -68:50 | 17X17 | 883 | 36 | 19991 | 10C | 1999 | .05 | 2420 | | | | | | | 249461 | 5.2 | B9 | |
| 130 | 753 | 399 | 6:09.1 | -68:50 | 24X23 | 892 | 92 | 40496 | 30C | 1350 | .05 | 1635 | | | | | | | 249461 | 5.2 | B9 | |
| 124 | 520 | 418 | 6:15.9 | -73:36 | 6X 6 | 153 | 77 | 905 | 1L | 905 | .05 | 1177 | | | | | | | 256286 | 6.8 | B9 | |
| 125 | 521 | 420 | 6:15.9 | -73:36 | 9X 9 | 468 | 197 | 4990 | 3L | 1663 | .05 | 2160 | | | | | | | 256286 | 6.8 | B9 | |
| 129 | 522 | 418 | 6:15.9 | -73:36 | 11X12 | 324 | 27 | 7033 | 10C | 703 | .05 | 850 | | | | | | | 256286 | 6.8 | B9 | |
| 130 | 522 | 416 | 6:15.9 | -73:36 | 14X14 | 671 | 67 | 33900 | 30C | 1130 | .05 | 1370 | | | | | | | 256286 | 6.8 | B9 | |
| 124 | 589 | 390 | 6:19.1 | -72:07 | 3X 4 | 88 | 82 | 42 | 1L | 42 | .05 | 55 | | | | | | | 256290 | 8.0 | A0 | |
| 125 | 590 | 391 | 6:19.1 | -72:07 | 4X 5 | 233 | 210 | 227 | 3L | 76 | .05 | 99 | | | | | | | 256290 | 8.0 | A0 | |
| 129 | 590 | 391 | 6:19.1 | -72:07 | 5X 5 | 74 | 28 | 451 | 10C | 45 | .05 | 55 | | | | | | | 256290 | 8.0 | A0 | |

NRL REPORT 8206

| FR. | X | Y | R.A. | DEC. | *X | *Y | P | BG | V | E.F | V/E | RE | UF | LM NO. | SIZE | BS | N NO. | HA | HI | NGC NO. | SAO NO. | M | SP |
|-----|-----|-----|--------|--------|----|----|---------|----|------|-----|-----|-----|----|--------|------|-----|-------|-----|-------|---------|---------|----|----|
| 130 | 591 | 308 | 6:19.1 | -72:07 | 6x | 6 | 204 | 73 | 1610 | 30C | 54 | .05 | 65 | | | | | | | 256290 | 8.0 | A0 | |
| 124 | 612 | 303 | 6:19.5 | -71:35 | 2x | 2 | 86 | 85 | 4 | 1L | 4 | .10 | 7 | | | 221 | | 0.1 | 0.01* | | | | |
| 125 | 612 | 305 | 6:19.5 | -71:35 | 2x | 2 | 224+232 | 22 | 3L | 7 | .10 | 12 | | | | 221 | | 0.1 | 0.01 | | | | |
| 129 | 613 | 307 | 6:19.5 | -71:35 | 2x | 2 | 30* | 30 | 0 | 10C | 0 | .10 | -- | | | 221 | | 0.1 | -- | | | | |
| 130 | 613 | 305 | 6:19.5 | -71:35 | 2x | 2 | 75* | 76 | -6 | 30C | 0 | .10 | -- | | | 221 | | 0.1 | -- | | | | |

ABSTRACT PRINTS